ARCHITECTURE

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The Hillside Housing Development

THE CASE HISTORY OF AN IDEA—FROM ITS BIRTH IN THE MIND OF CLARENCE S. STEIN, ARCHITECT, TO ITS MATERIAL REALIZATION IN THE BRONX, NEW YORK

By Henry H. Saylor

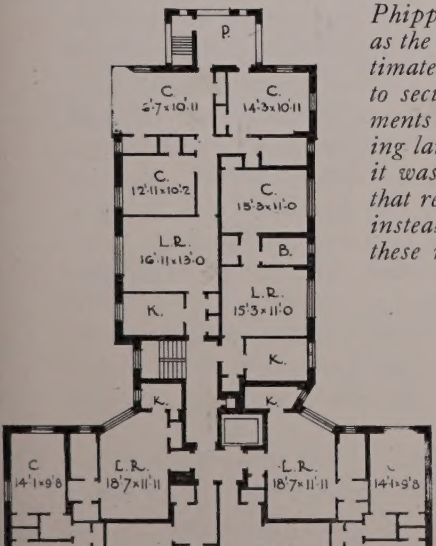
ACCORDING to Mr. Shakespeare,

> "When we mean to build
> We first survey the plot, then draw the model;
> And when we see the figure of the house,
> Then must we rate the cost of the erection; . . ."

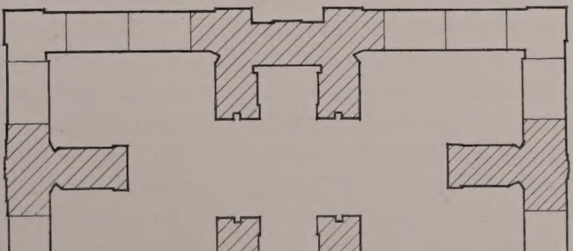
The plot first—then what to do with it. It has been a rather firmly established tradition through the years, but it does not apply to Hillside. And therein, it seems to me, lies the main reason why Hillside is not merely another building or group of buildings.

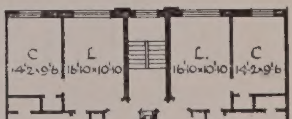
Hillside is not the result of this age-old impulse to make a given piece of land yield a profit, either in money or in satisfaction. Hillside started rather as an abstract idea, having no intimate connection with land or building materials or profit. The idea was this: Would it be possible to create a complete and integrated community within the larger framework of a city—a community in which families of limited income might find the setting for what President Roosevelt has called "a more abundant life"?

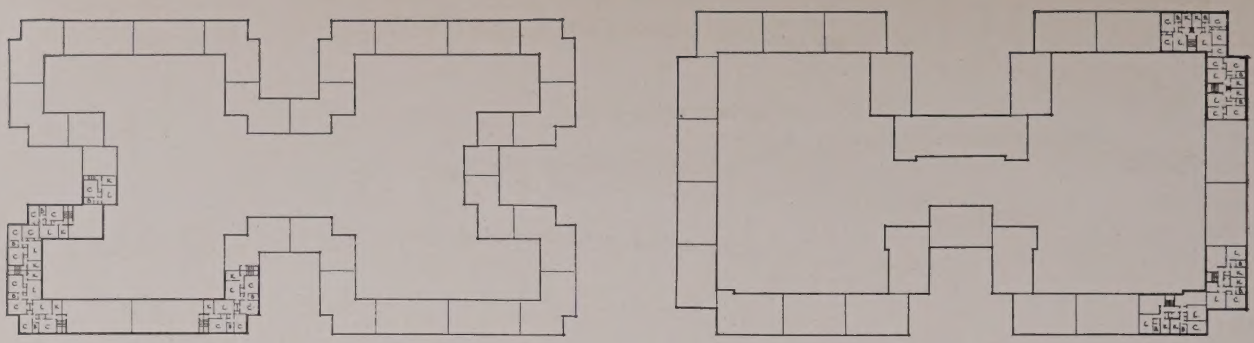
Housing history has been written with amazing rapidity here in America during the last three or four years. We take for granted today a great many things that were regarded as visionary dreams even so late as 1930. Housing that would meet new standards as to light, air, safety, privacy, sanitation and general environment—housing that would do this and yet be within reach of the lower income groups—this was, for America, little more than a gleam in the eyes of a few idealists. There are many privations this nation has suffered in the

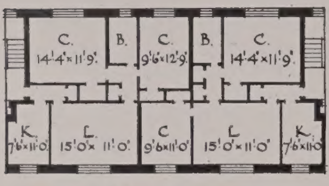


Phipps Garden Apartments were chosen as the basis of the first studies of what ultimately became Hillside. The object was to secure the same advantages of apartments with cross ventilation surrounding landscaped garden courts. However, it was necessary that the cost be cut so that rentals might average $11 per room instead of $16 per room (since that time these rentals have been decreased to an average of about $14.50). Below in the centre is shown the block plan, consisting of 22 units, of which those cross-hatched are six-story elevator buildings (cost per cubic foot, about 42 cents); the remainder, four-story walk-ups (cost per cubic foot, about 39 cents). At the extreme left is the typical elevator unit; at the right of the group below, a typical section of the ribbon type, showing four-room apartments. The coverage is 43 per cent—36 including half the surrounding streets



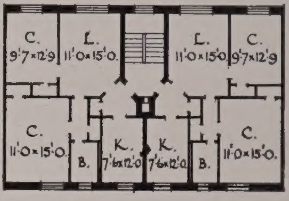






The Z type

Above are two plot plans showing first studies of the new project which, for convenience in comparison, assumed the same plot of 460 ft. by 260 ft. Below these are two of the various type plans developed in these studies. The X type uses the same layout as the Phipps scheme, but with smaller rooms. In the Z type, the span was decreased to 29 feet as compared with 33 for the X type, and 35 feet of the Phipps.



The X type

As a result of continued study, it was determined that apartment houses of the type desired could be built to rent for $11 per room per month under the following conditions: 1. Land cost, one dollar per square foot or less. 2. A large-scale operation, four times or more that of the Phipps. 3. The use of one-half to three-quarters of the basement space for apartments. 4. Less expensive treatment of the exterior than that of Phipps. 5. A simplification of interior equipment, such as that of bathrooms. 6. Smaller room sizes than Phipps. 7. Mortgage money at a low rate of interest, with amortization over a long period. 8. Tax exemption of the buildings

last five years, many losses, but to offset them there is at least this one tremendous gain—the widespread realization that an American family has, or shall have, the right to live in decent shelter—not merely for its own sake, but for the sake of all of us.

Direct governmental housing or use of governmental credit for housing did not exist in the United States when Hillside was first conceived. During the development of the plans two different governmental agencies were set up in Washington, the RFC and the PWA offering different terms and different regulations. The requirements of the PWA changed as that organization took form—the familiar picture of a ship "finding herself" under the complex stresses and strains of an enveloping public opinion.

Hillside, then—three years ago—was merely an idea, in the mind of Clarence Stein. It was, however, not without a foundation—the realization of accomplishment in group housing elsewhere, the intimate experience of Sunnyside, the Phipps Houses in Queens, Radburn in New Jersey, Chatham Village in Pittsburgh. But this idea was another forward step—the conception of a self-contained, self-reliant community set down by necessity in the midst of the unplanned, unintegrated, chaotic mass of humanity that is New York City, and yet within the economic reach of a class for which such amenities were considered wholly unattainable.

From the very beginning, there was an unusually close association between architect and builder—Andrew J. Eken, of Starrett Brothers & Eken. Much of the waste motion and loss of time consumed ordinarily in making rough working drawings was avoided through parallel studies by architect and builder, with constant comparison of means and results.

The architect and those who co-operated with him were not dealing with a static problem. They set out with a definite objective, but the means of meeting the objective went through a series of changes—constantly altering form to meet new sets of requirements; many of these developed as the result of this being a semi-governmental project, taking shape during the formative period of constructive government policy in regard to housing.

Here, then, in barest outline, was the problem Clarence Stein and a small group of enthusiasts with whom he was conferring, set for themselves:

The new community unit must have group planning that would be as open, detail plans that would be at least as good as those at Phipps, but the cost must be less.

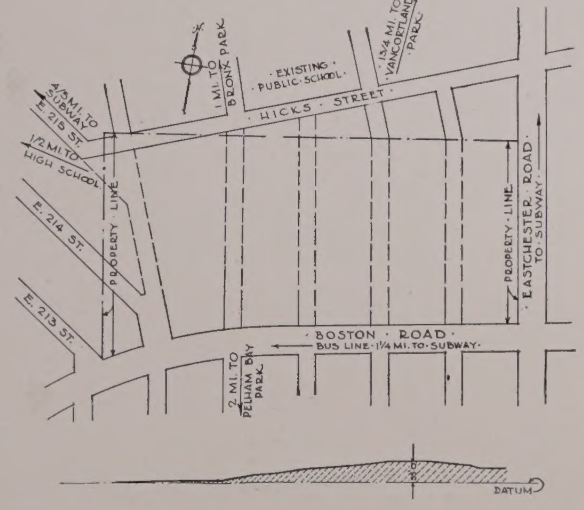
There were two important facts that should contribute to the realization of the tentative plans. One was the fact that the government was about to offer a source of capital that had not heretofore been available in quantity for such a large project. In the second place, the New York State Housing Board had the power of granting tax exemption on buildings that would provide this sort of low-cost housing—tax exemption on the buildings, not on the land.

The earliest studies brought the conviction that there would have to be a predominance of four-story walk-up buildings, with possibly a small number of elevator apartments, and that the land could not cost more than one dollar per square foot.

It became evident very early in the studies that if the eleven-dollar rental was to be reached at all, the apartment buildings must utilize far more intensively the space they enclosed. The weak spot seemed to be the basements. Basements of apartment houses heretofore have been somewhat of a left-over waste space which had to be paid for, but could not profitably be used. The need for the utilization of every cubic foot of space, however, soon made evident the fact that the basement levels must be utilized for rental apartments to the extent of about half of their areas.

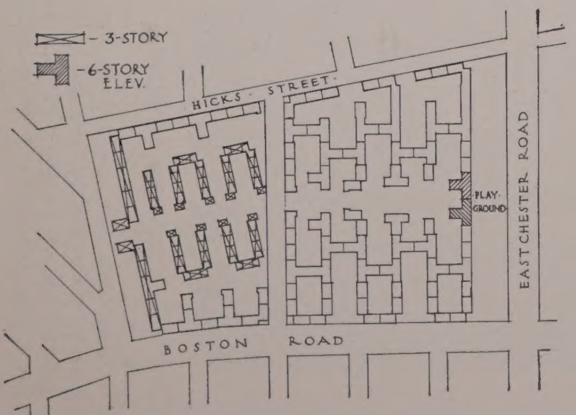
All of this was preliminary study in advance of the selection of a site. The various boroughs of the city were now combed for possible sites within the cost limits set and of sufficient magnitude to form a complete self-contained community within the larger framework of the city. Facilities to meet certain communal requirements must exist in the vicinity; there must be existing educational facilities nearby; there must be playground space for children of elementary school age from five to fourteen. Obviously it would be impracticable, according to the teachings of experience, to provide playground space for older children and adults to include such unwieldy elements as baseball diamonds, tennis

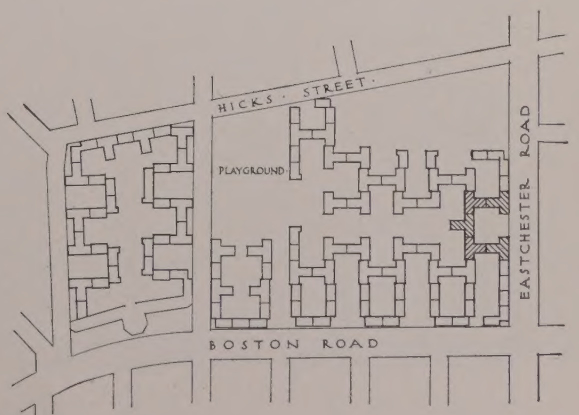
While studies on the new project were being made, there was a search for a site that would fit the following requirements: 1. Adequate for a community of five thousand or more (at 250 persons per acre, at least 20 acres). 2. Land cost of one dollar per square foot or less, including public utilities which the owner would put in. 3. Possibility of reorganizing street layout to eliminate dangers and nuisances of through traffic. 4. Convenience to working and recreational areas. 5. Close proximity to schools and other community equipment, with, as an essential, an elementary school adjacent to the property. 6. Attractive site without unusual construction difficulties such as rocks and swamps.

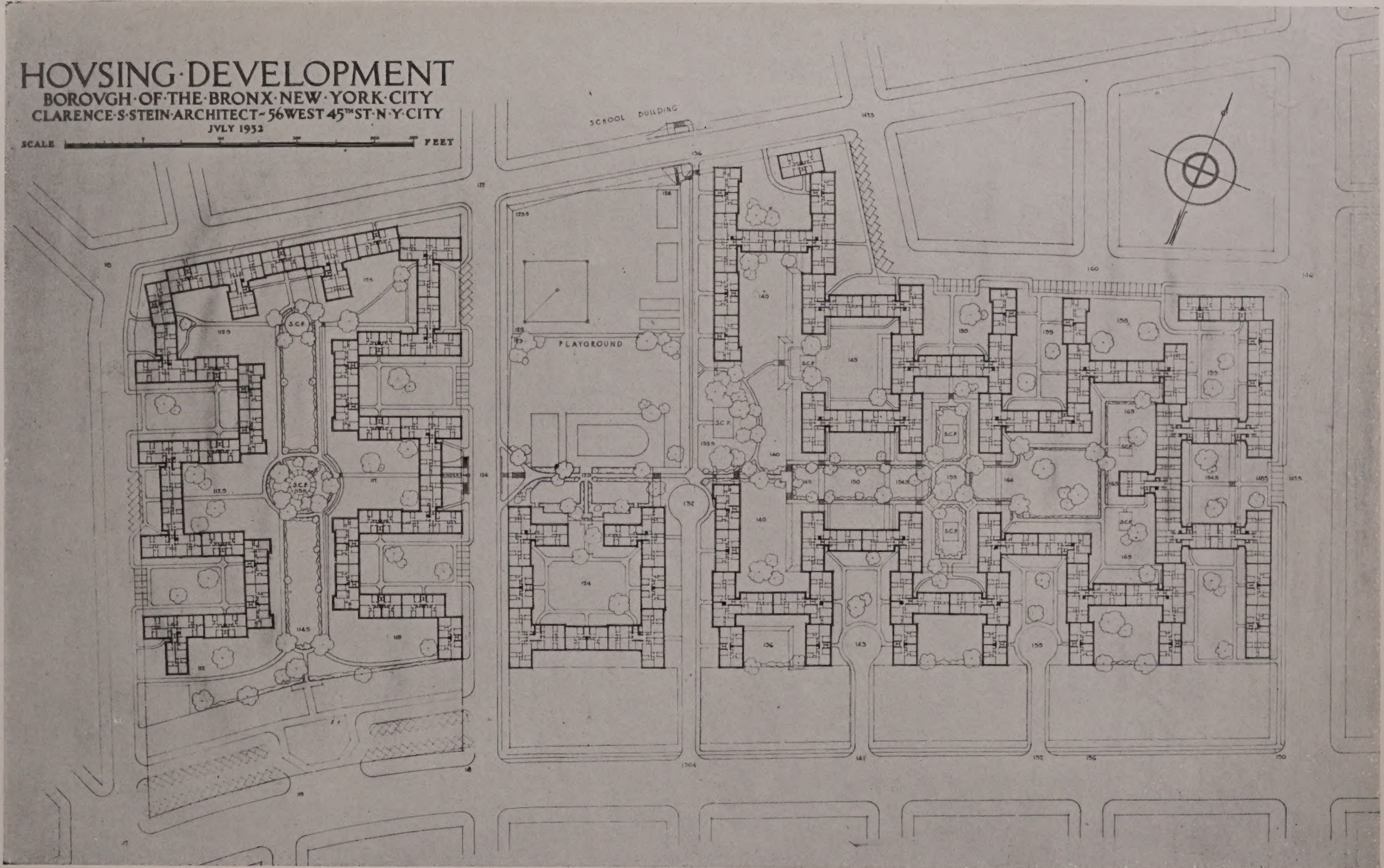


The 26-acre undeveloped piece of land owned by the family of Nathan Straus, Jr., was selected, the price paid being 70 cents per square foot, exclusive of area mapped for streets. Its contour section, shown herewith, facilitated the development of garden apartments one-half story below the level of entrance from the street.

Two of a series of preliminary studies of the site are shown; scheme 1, at the left below, used the X type and walk-up T type of four-story buildings, with a few six-story elevator buildings, and some three-story two-family buildings. Scheme 2, at the right below, shows the 2½-acre playgound needed for children through elementary school age. This was afterwards moved to the south side of the plot







HOVSING·DEVELOPMENT
BOROVGH·OF·THE·BRONX·NEW·YORK·CITY
CLARENCE·S·STEIN·ARCHITECT–56WEST 45TH ST·N·Y·CITY
JVLY 1932
SCALE
FEET
SCHOOL BUILDING
PLAYGROUND
S.C.P.

Above is a plan upon which application was made to the RFC in July, 1932, for a loan. All through streets have been closed excepting one. Before this study, the owner had decided to retain the 100-foot strip along the Boston Post Road; incidentally, this decreased the total cost of the land by eliminating the part that would be most heavily taxed, and the project lost merely that portion of land least desirable for residential purposes because of its proximity to a noisy avenue.

On November 1, 1932, the RFC approved a loan on this layout, which had been previously approved by the New York State Housing Board, the loan consisting of two-thirds of the estimated cost of land and buildings at 5 per cent interest, with an amortization of 2 per cent. 5378 rooms were provided, in semi-fireproof construction courts, and the like. These things must be available in the neighborhood, but could not be included within the boundaries of the development itself.

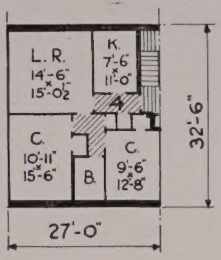
Another important consideration was that there be freedom from an enforced street pattern. Experience at Radburn had shown the possibility of developing a new traffic system that would give safety and, with it, freedom from the other characteristic annoyances of the through streets.

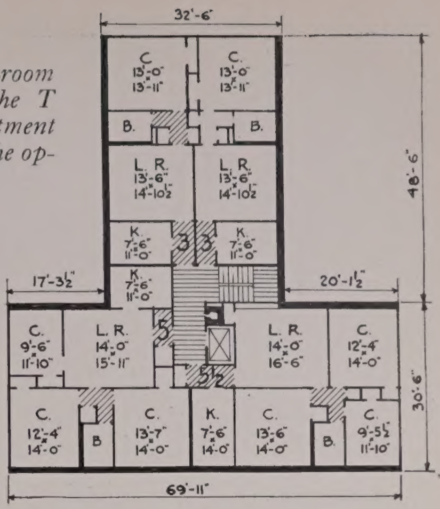
Circulation channels throughout the development should be determined by the needs of the community itself, without the necessity of carrying through the streets from the abutting territory. Obviously there was no hope for the successful creation of such a community as had been visualized if the ordinary gridiron pattern of city streets were to be imposed upon the site—that was one of the main handicaps to decent planning which must be banished.

Hillside was finally chosen as meeting these requirements, not the least of its advantages being the attitude of the owner, Nathan Strauss, Jr.—keenly sympathetic with the objectives and willing to put in his land at a low valuation in order to further these objectives.

Incidentally, the Hillside site, by reason of its slope, dovetailed nicely into the necessity for adapting the grades to the greater utilization of the basement levels for apartments.

Before the definite amount of space to be used for apartments could be determined, it was necessary to consider other demands upon basement space: storage space for trunks, screens, perambulators; rooms for gas and electric meters, administration and maintenance of buildings and grounds, community social facilities such as nursery school, assembly room, club rooms, tenants' work shops, boiler room, and fuel storage. The question which had to be answered at once was, can half of the basement area be used for apartments, and still leave enough space for all of these other necessities?

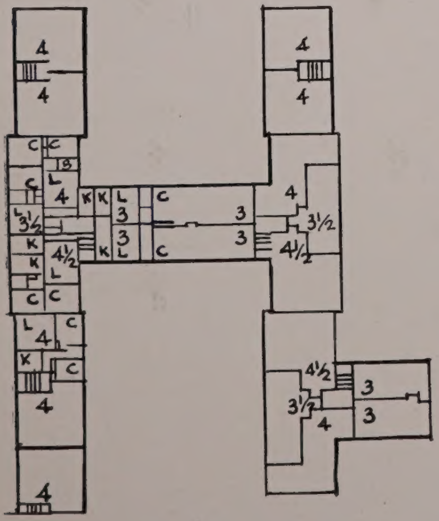


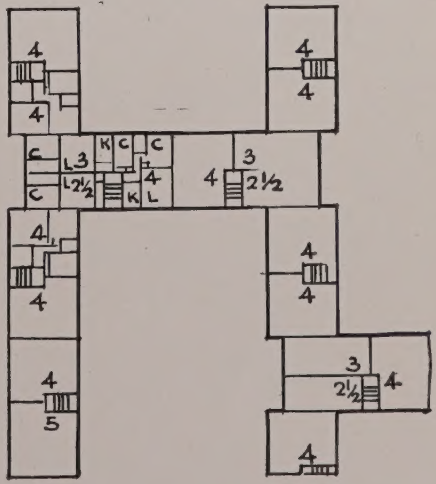


Details of the four-room apartment and of the T type of elevator apartment used in the plan on the opposite page

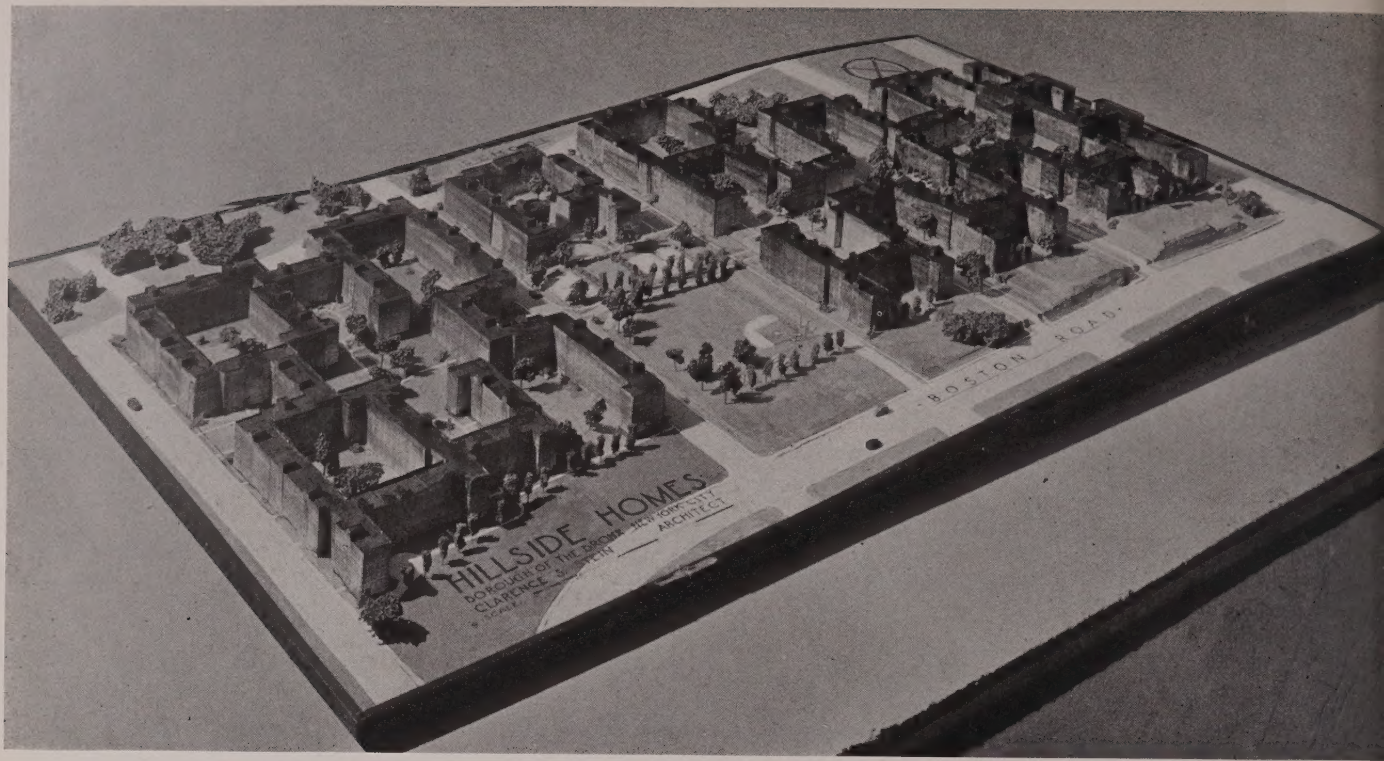
To answer this as well as the question of what community facilities were required in a development of this type, Mr. Stein now had made for his own guidance in the design, a survey, the report of which is a large book in itself. It embraced the activities and the degree of success in providing recreational and other community facilities for practically all of the large-scale housing developments in this country. To attempt any sort of an adequate recapitulation of this survey is impossible here.

Studies of the classes of people that would probably live at Hillside brought about a certain relationship governing the apartments of various sizes—8 per cent of five-room apartments; 50 per cent, four-room; 15 per cent, three-room; and the balance, two-room. Closely





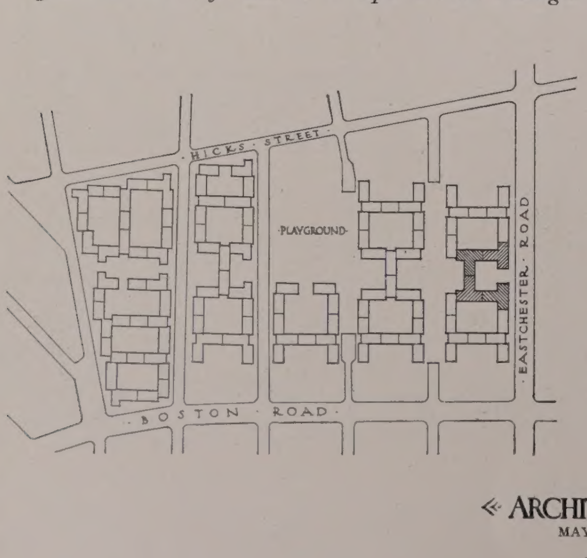
Meanwhile, in the architectural studies a forward step was made as shown by the two line plans herewith, replacing the walk-up T units (left) with a new organization of I units. These were less wasteful and costly, yet served the same purpose of organizing the intersection of two units forming the perimeter of two courts

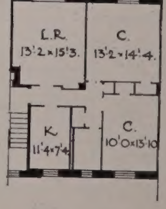

HILLSIDE HOMES
BOROUGH OF THE BRONX NEW YORK CITY
CLARENCE S. STEIN ARCHITECT
BOSTON ROAD

A model made at the end of 1932, showing, among other things, the relocation of the playground

associated with this disposition of space units was a study of types of plan.

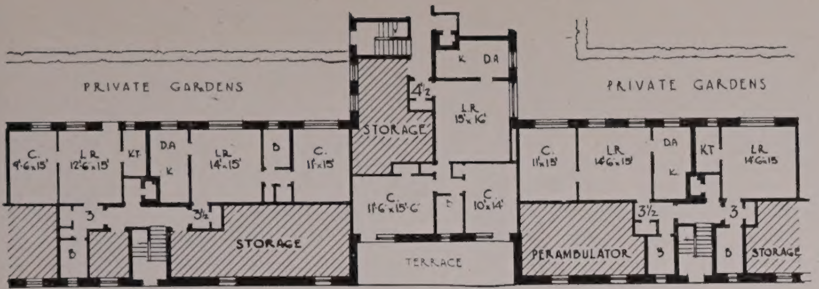
The long process of reaching the results which are now almost a finished reality is not one for description in words. Representative examples of the progressive studies are shown herewith, together with captions which explain in detail some of the steps in this laborious procedure. Nor was this slow but sure march to an achievement made in the form of drawings alone. Every change in drawing was paralleled by study in the three dimensions, not only for the unit and the block, but also of their relation to the site and its contours. Nor were the studies confined to small-scale representations; when the four-room apartment seemed to have reached a satisfactory stage in the drawings and models, a unit was built at actual size and completely furnished as a final check. So, too, with the mechanical equipment. When a tentative and apparently economical arrangement for plumbing had been reached, for





In June, 1933, PWA had come into being; application was withdrawn from the RFC and made to PWA, with new plans and new financial set-ups to meet changed conditions: 1. Closing public streets was a lengthy process, so the new plan took all buildings out of the bed of streets and preserved their theoretical grades. Because of the wasteful plan of Wilson Avenue, the western portion of the property was given up. This and the strip along the Boston Post Road reduced the site to about 20 acres. 2. Tax exemption, making possible a saving in rental of a dollar per room per month, had been lost, but was balanced by a lower rate of interest under PWA—4 per cent as against 5 per cent under RFC. 3. Longer amortization was allowed for fireproof construction.

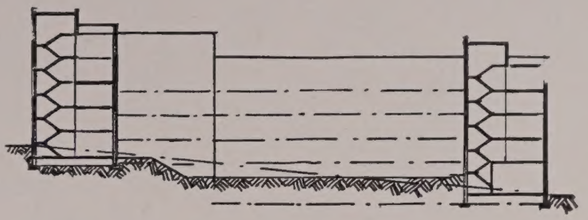
In September, 1933, PWA approved a loan of 85 per cent, subject to a satisfactory contract, based on this plan. Compare the detail four-room apartment with the Phipps plans to see the results of continued study. Floor area and gross area per room are approximately the same



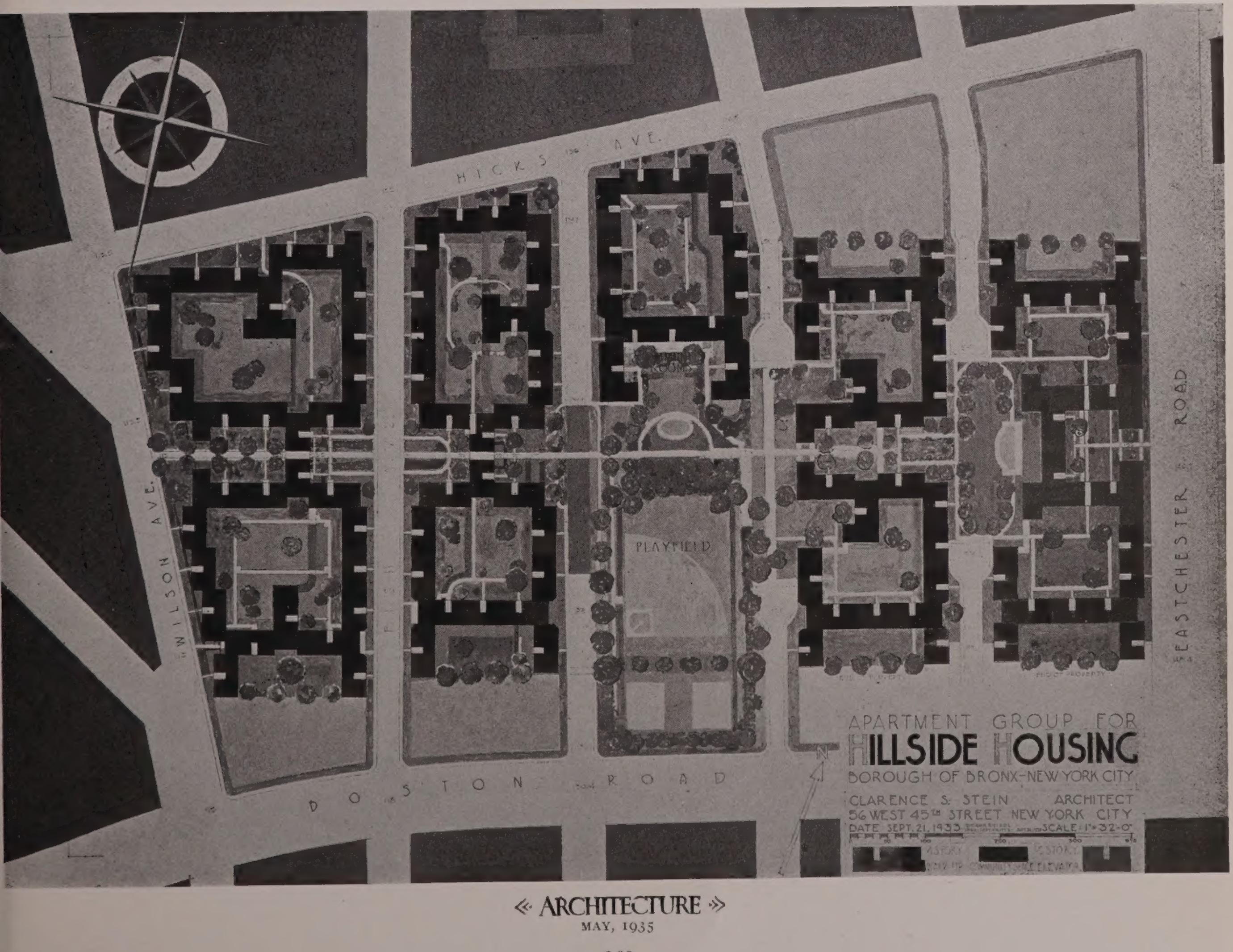
A typical basement plan, showing, with the section below, how the sloping contours made possible the utilization of the lower side of the building for garden apartments opening to grade, and still providing the necessary storage space. There is an air space of four feet under the floors of these lower apartments. They are reached from the main entrance by descending a half flight

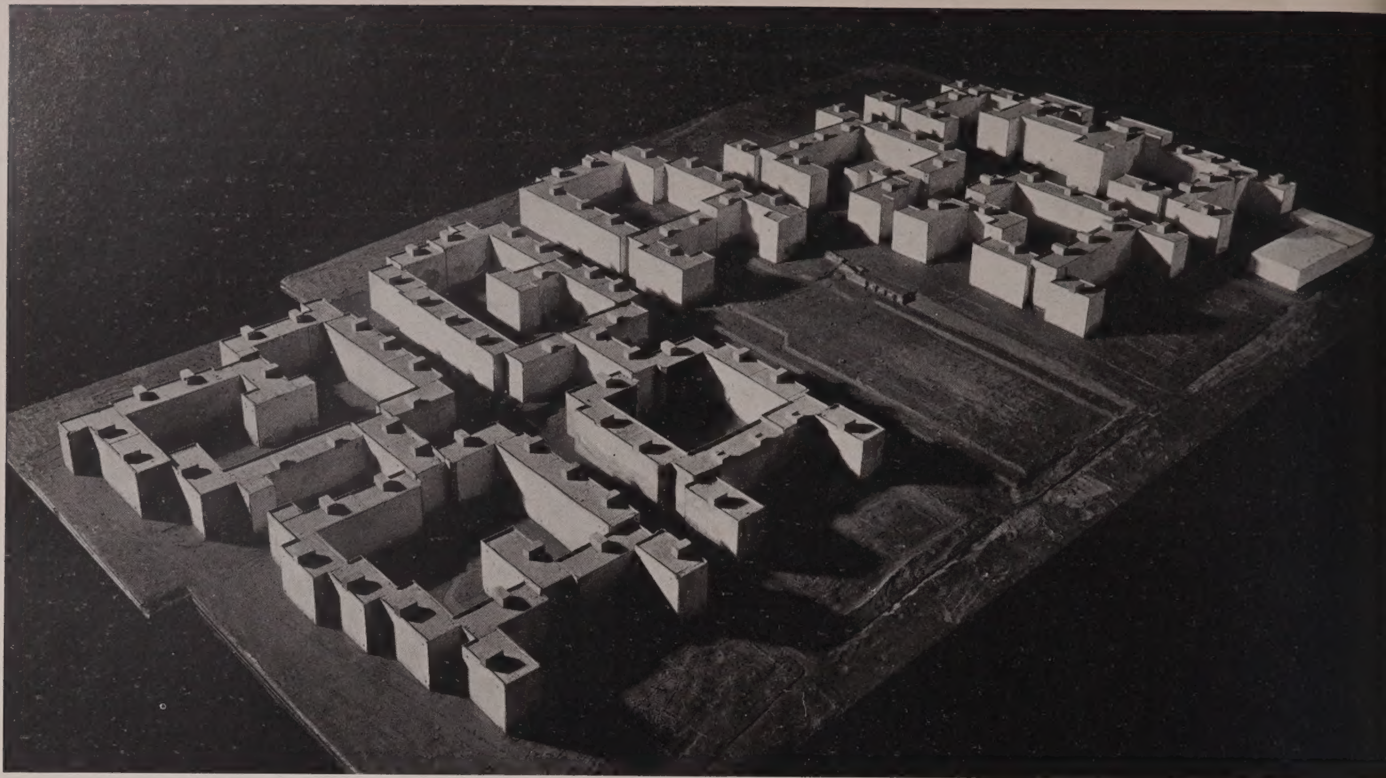
instance, a complete unit was erected by the builder or sub-contractor, studied in the smallest detail to find ways of cutting costs, securing greater efficiency, and saving time in erection.

In many ways, therefore, the Hillside project differed radically from the customary architectural practice. It started with an abstract idea. Its essentials were formulated to the extent of determining the requirements as to site. The site was found, and once more the arm-in-arm march of architect and builder was resumed in a particularly close and sympathetic relationship. It is difficult, in looking back, to see how such a large-scale achievement could otherwise have gone far beyond the idea stage.



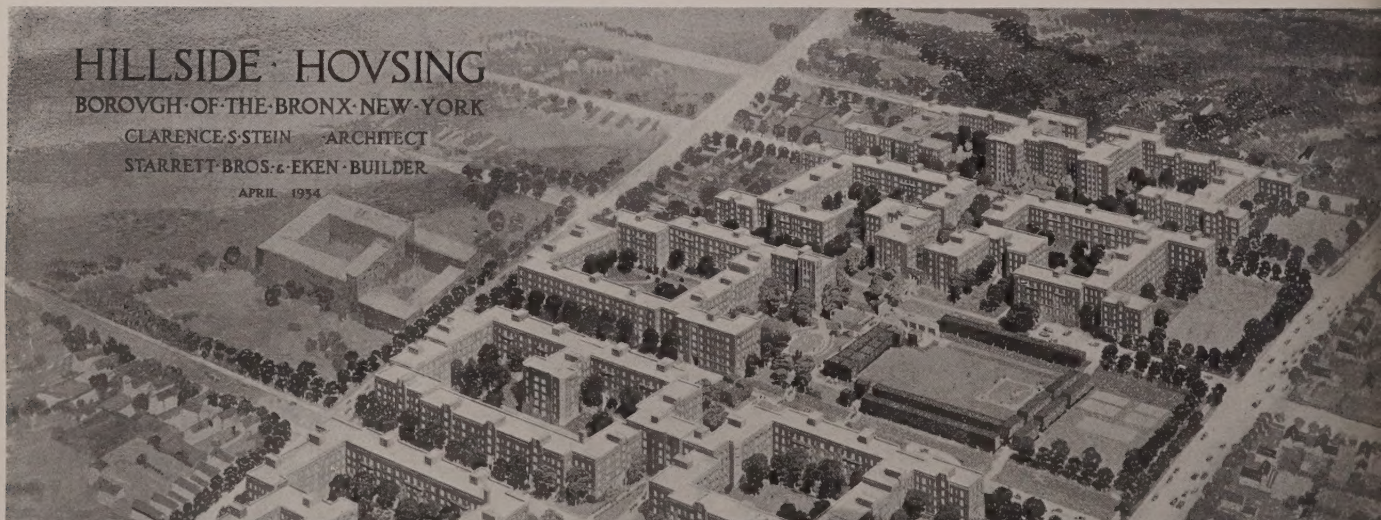
The final plot plan, below, which preserves the location and levels of the public streets. These latter will eventually be closed. Date of this final plan, which has been carried out with only minor changes, is September 21, 1933. Not until the following January, however, was the loan authorized and work started on the working drawings and specifications





From the very beginning, the study of plans and sections was paralleled by a study in the solid. This model was made not for display, but for the architect's own use, at a scale of $\frac{1}{16}$ inch to the foot. Contours were secured by modelling clay, and were changed to meet the studies for grading. Wood blocks are used to represent the units

A final perspective, made in April, 1934. The elevator apartments, it will be noticed, are at the high point of the land, serving as a dominating element in a long vista up the central axis. It is interesting to compare this perspective with the airplane view shown as the frontispiece


HILLSIDE · HOVSING
BOROVGH·OF·THE·BRONX·NEW·YORK
CLARENCE·S·STEIN ·ARCHITECT
STARRETT·BROS·&·EKEN·BUILDER
APRIL 1934

Why Not Design the Living-room to be Livable?

By C. John Marsman

ILLUSTRATIONS BY THE AUTHOR

The architect and the interior decorator are, generally speaking, working toward the same end. It is curious, therefore, that one frequently nullifies the best efforts of the other. The interior decorator feels that the architect would not design his rooms as he so often does if he would but visualize in advance the functioning of the room. What the architect feels is perhaps another story. Here is the decorator's case—and it unquestionably has in it some points by which the architect may profit.
—EDITOR

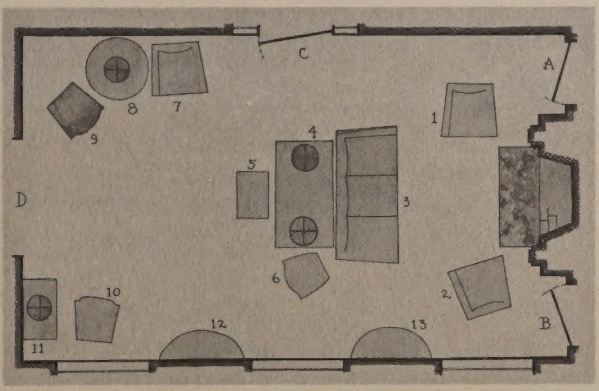
AT the very outset in designing a living-room, or for that matter any room, it is helpful to sketch in some furniture. The living-room is going to depend in large measure for its enjoyable qualities on the comfort produced by the agreement of plan and furniture arrangement. Experimenting, therefore, with the placing of a sofa or two, of comfortable chairs, tables, and even wall pieces, such as consoles or bookcases, and the possible grand piano, with relation to the placing of doors and windows and chimneypiece is not wasted effort. And the chances are that if this arrangement of furniture is thought of and studied, any plan that is preconceived, especially one that patterns itself after the conventional modern living-room, will be found to be improved if revised.

Certain features of the modern living-room have, through continually repeated appearance, become practically traditional. The chimneypiece flanked by doors on a narrow wall; the chimneypiece flanked by "French doors" that lead to a porch or terrace; the axial adjustment of chimneypiece (plus doors) and a central door on the opposite wall; large openings in walls between living-room and dining-room or between living-room and hall; centrally placed glazed doors, often with supplementary narrow side windows, opening from garden or porch—all these are familiar. And they are to be seen in many rooms of no matter what size or proportions, designed for all sorts of people.

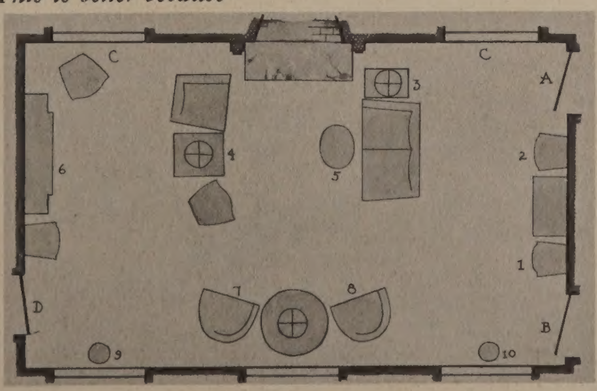
This is a living-room plan that makes a comfortable arrangement of furniture very difficult because of the placing of doors A, B and C, the existence of the large opening D, and its axial relationship with the chimneypiece. The doors A and B, leading from a loggia and library respectively, nullify any attempts to render the space around the fireplace a comfortable and peaceful one. An arrangement of furniture about the fireplace has been sketched in, as well as for the rest of the room. The wall space adjacent to the door A is useless for furniture, and the presence of the glazed garden door C on the centre of the wall makes furnishing, both against the wall and out in the room, still more difficult. The group of sofa, large table with lamps, stool and armchair in the centre space could be comfortable enough in itself, but its position with relation to the room is unfortunate: it is an island in the midst of several currents.

The furniture, according to the numbers on the plan, can be identified as follows: 1 and 2, overstuffed armchairs; 3, overstuffed sofa; 4, library desk-table with lamp; 5, stool; 6, armchair; 7, overstuffed armchair; 8, round table with lamp; 9 and 10, armchairs; 11, small chest of drawers with lamp; 12 and 13, console tables

Practically everything about this plan is wrong—

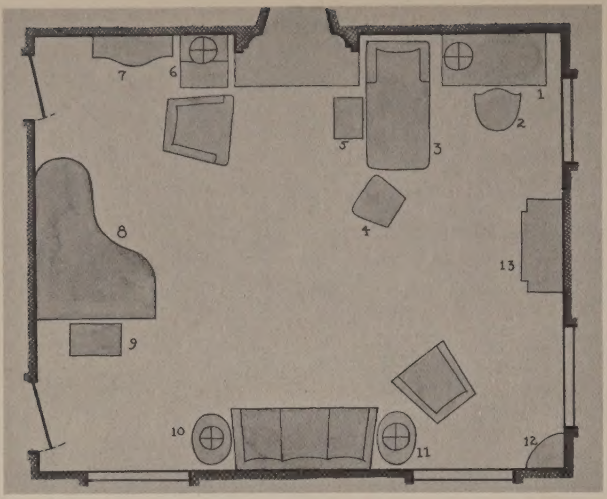


This is better because—



The plan of the preceding sketch has been revised somewhat to bring about possibilities for a more comfortable and generally pleasing arrangement of furniture. The chimneypiece has been placed on the longer wall where the glazed door was before. The windows C look out on the garden, and while one of these could be retained as a door it seems better for the general arrangement of the room that the door to the garden be placed if possible in the hall. The single door D, leading from the hall, replaces the former large opening. The projecting chimney breast of the preceding sketch has been removed, and the new chimneypiece placed flat against the wall. The room itself, except for the readjustment of architectural features, remains the same. It can be seen that there is room for more furniture, without any hint of overcrowding—there is even room for a piano. And the present rearrangement of both plan and furniture makes an attractive scheme of decoration possible. The room would be still further improved if it were wider.

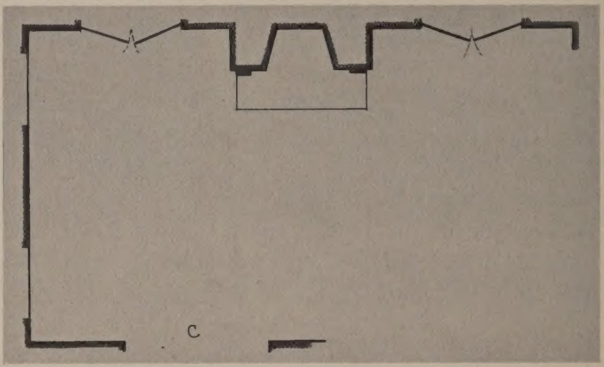
Furniture that does not appear in the preceding sketch: 1 and 2, side chairs; 3 and 4, tables with lamps; 5, low table; 6, bookcase; 7 and 8, upholstered armchairs; 9 and 10, flower stands



The proportions of this plan, more nearly approximating a square, produce a generally more successful living-room than the proportions that run to length and narrowness—speaking for the room of average size. The axial placing of doors has here been avoided, and the chimneypiece has been placed on a wall without openings—always a desirable feature.

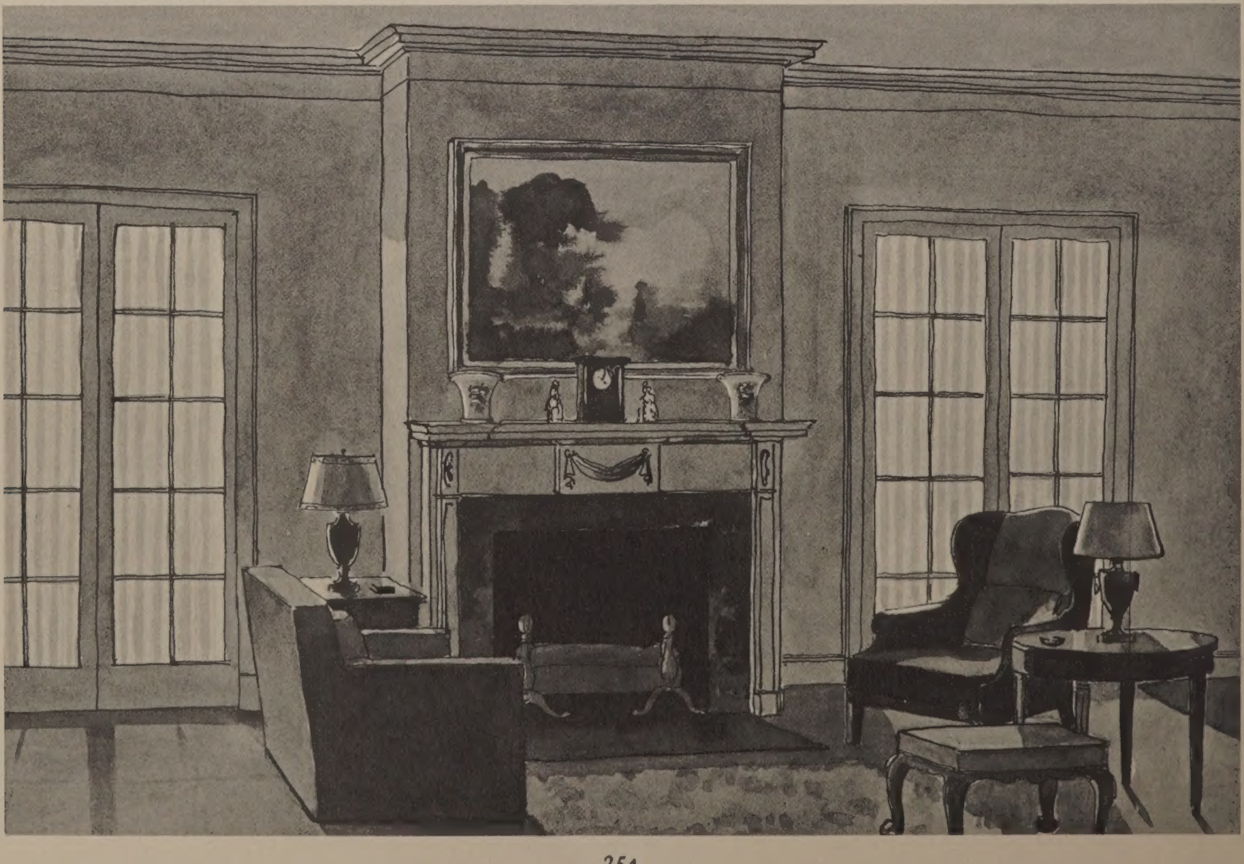
Furniture unaccounted for in the preceding sketches: 1, table desk with lamp; 2, desk chair; 3, overstuffed chaise longue; 4, armchair; 5, low table; 6, small drop-leaf table with lamp; 7, console table or commode; 8, piano; 9, stool; 10 and 11, tables with lamps; 12, corner cabinet; 13, bookcase or cabinet

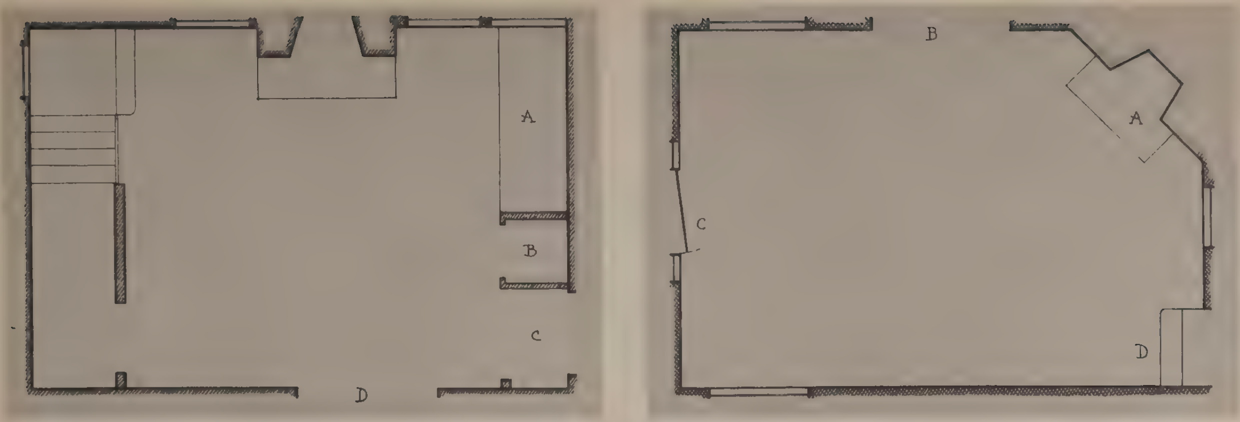
This section of a plan—below, with its perspective development as shown below, illustrates the conventional arrangement of chimneypiece on a chimney breast flanked by French doors leading from a porch. A satisfactory arrangement of furniture on this plan is next to impossible



But sanctioned by usage or not, the truth is that practically none of these features would survive in a plan that was studiously visualized that it might provide for the ultimate comfort of the owner and his possible desire for a pleasant scheme of "decoration." The chimneypiece flanked by doors on an end wall would be separated from its doors in this process of restudy and put whenever possible on an unbroken longer wall. The composition of chimneypiece and two near-adjacent French doors would be

An imaginary sketch of the room built on the plan shown above and to the right. The arrangement of furniture cannot be called satisfactory, however handsome the individual pieces or the decorative accessories are; the existence of passageways around the group nullifies the idea of comfort. Furthermore, the person sitting in the wing chair is in line of vision from the street entrance door through the large opening C on the plan. And the person sitting in the overstuffed chair would be in view both from the hall and the dining-room across the hall and from the hall stairway. The chimney breast here is an unattractive feature decoratively, rendered even more so by the neighboring doors. And, furthermore, it is taking up valuable floor space





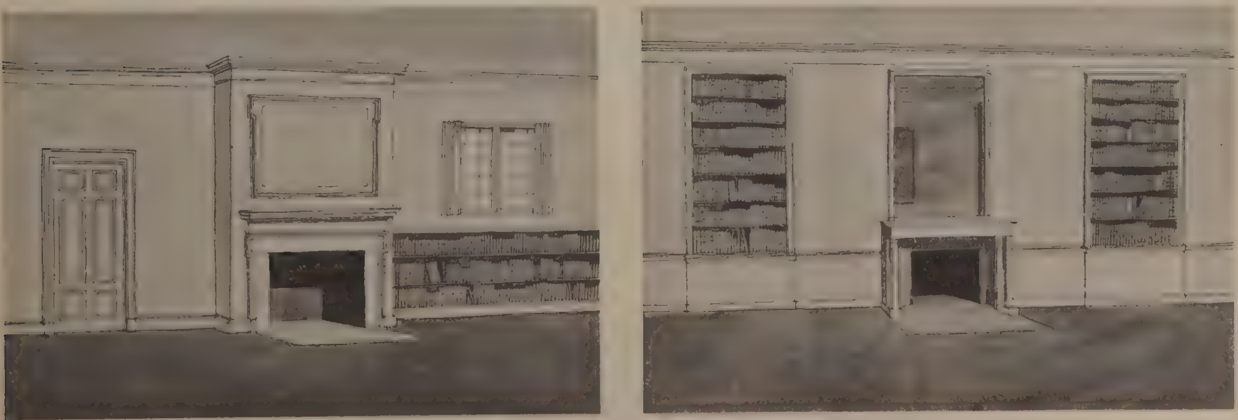
This living-room plan—left above—occurs in the plan of a small house. The built-in seat A is the only place where one can sit in some degree of comfort in the room. B is a clothes closet; C, a vestibule, and D, an opening to the dining-room. It is difficult to see how this room could be furnished at all, even after all hope for comfort had been given up. Referring to the plan above and to the right, the location of the fireplace is unsatisfactory because of the features B, an opening leading to the dining-room, and D, an opening and steps down from the hall. And the conventionally placed door C to the porch or garden makes comfortable furnishing still more difficult. If it were possible, from the point of view of the exterior, to shift this door to either end of the wall, and take away its unnecessary side windows; if the opening B could be suppressed entirely and the dining-room entered from the hall; and, finally, if the opening D could be closed with a door, the room could probably be furnished

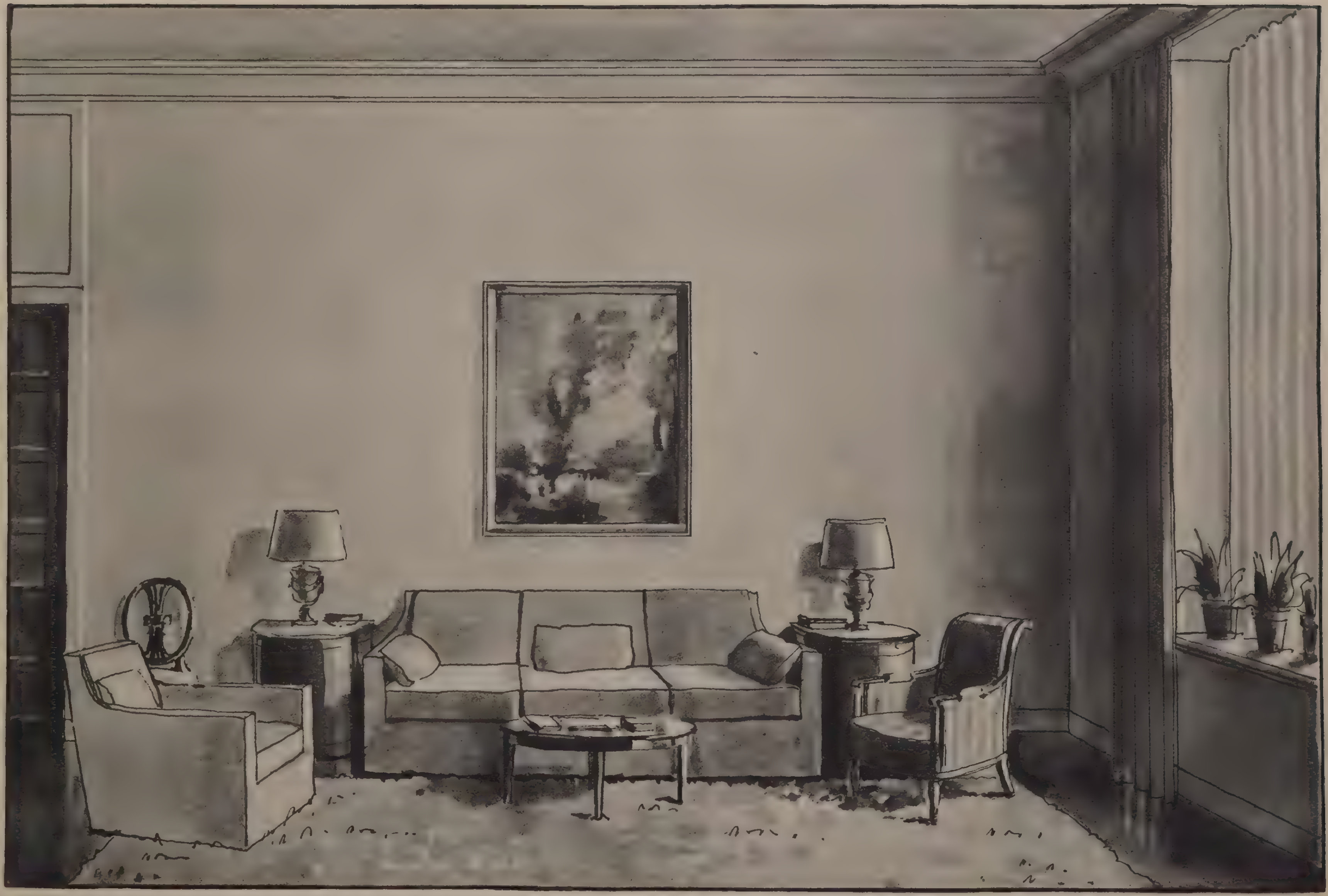
reconsidered, for no combination is more unsatisfactory in a room where a livable arrangement of furniture is desired. The large openings in walls would be stopped up (unless perhaps they occurred in some *Moderne* scheme in which all the floor spaces were part of one large room) and single or double doors substituted. And these doors, as well as glazed garden doors, would preferably, as far as circumstances permitted, be placed not on the centres of walls but near the ends.

Furniture has a way, if it is permitted by the architect, of assembling naturally almost by itself about that feature that has always been thought of as the heart of a living-room—the fireplace. The placing of chairs and sofas and convenient small tables around the fireplace is a matter of established habit. It has the approval of centuries of comfortable, cheerful and graceful living. Of course that fact in itself is no argument in this iconoclastic age for its being continued. Nevertheless, the fireplace with its accessories, the beautifully designed mantelpiece surrounding it, and the overmantel decoration, are far from obsolete today. And it is likely that a substitute that can exercise the same friendliness, attraction and charm, the same power of holding the room together, will be long in appearing. (Several possible arrangements of furniture around the fireplace are shown in the accompanying sketches, as well as arrangements of secondary groups, and arrangements for rooms without fireplaces.)

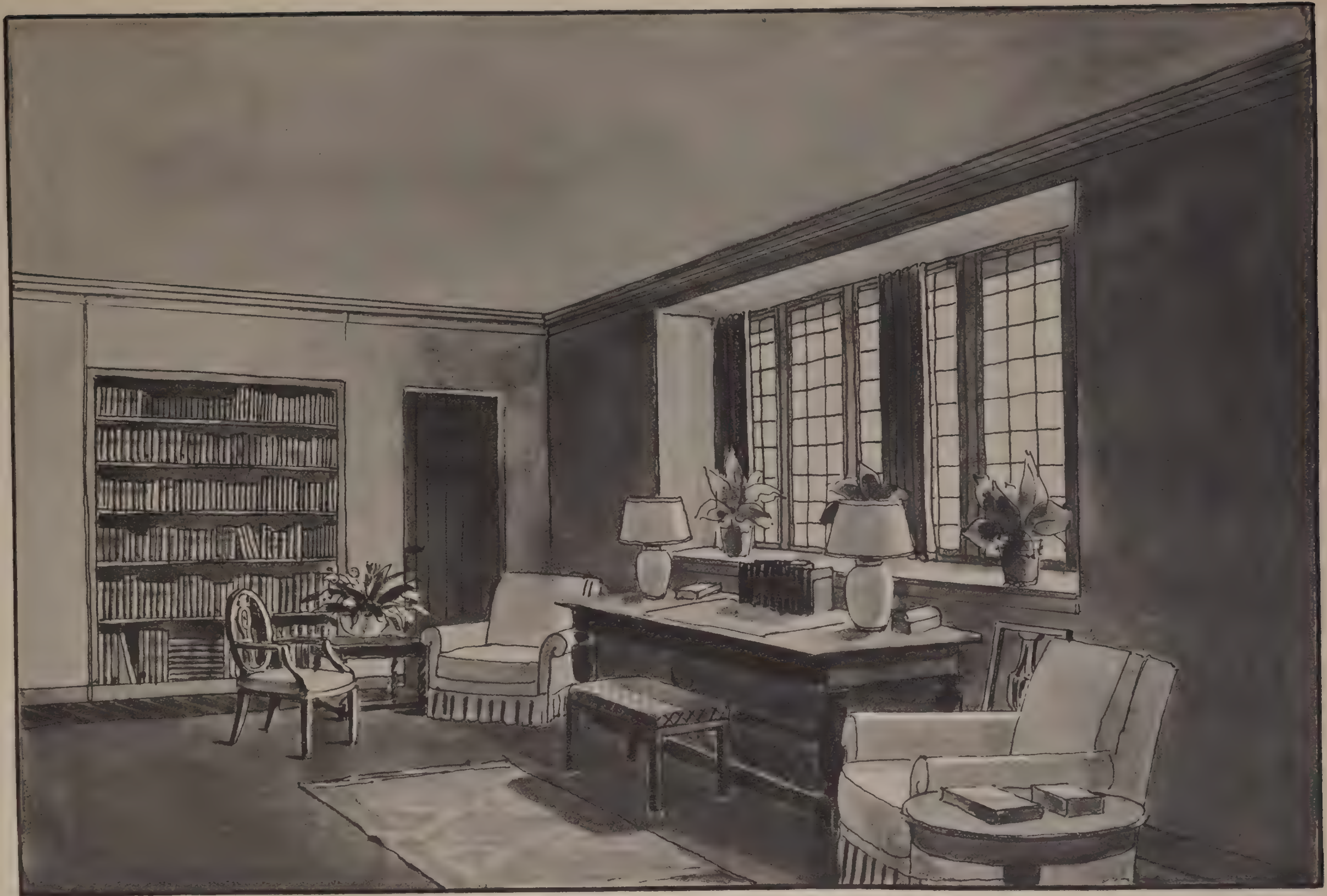
It seems desirable from every standpoint—logical, comfortable and æsthetic—that the chimneypiece in the average room (the huge, long room with two chimneys is a different

The low book shelves cutting the wall horizontally at an awkward height (left illustration below) are an unsatisfactory decorative feature. While the chimneypiece and panel over it are of good design, their effectiveness is spoiled by the presence of chimney breast, book shelves, and small high window. As to the illustration at the right below, while the rather formal note introduced into this composition by the carefully balanced built-in book shelves on either side of the chimneypiece may not always be desirable, still the effect of this treatment is a great improvement on that in the adjoining sketch. The suppression of the chimney breast is also an improvement. The carrying up of vertical lines from floor to cornice, a practice of designers of the eighteenth century, serves to harmonize the architectural design, and also, in the case of a rather low room, serves to produce a counteracting sense of height

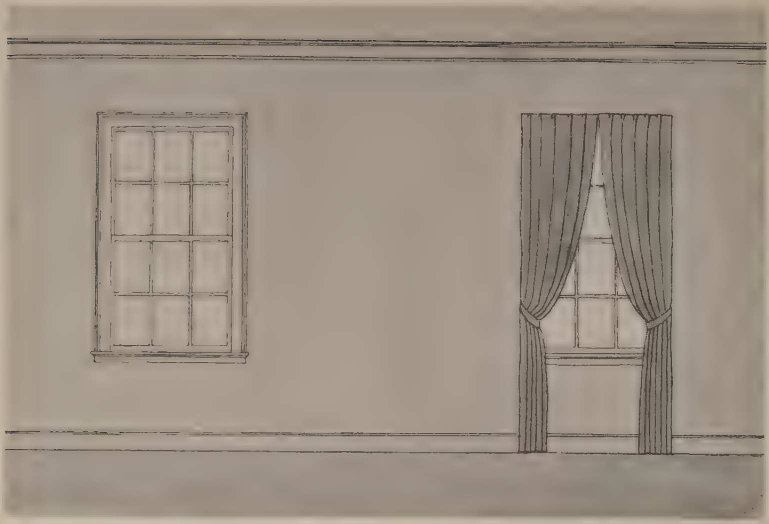




In a room that has no chimneypiece, an unobstructed wall space will facilitate the arrangement of a group of furniture that can serve as the focal point of the room's interest. The group of sofa, small commodes with lamps, and comfortable chairs, illustrated, would require a wall space of at least eleven or twelve feet. Pre-planning of possible furniture arrangements is of great assistance in the question of where to place electric base plugs



Another suggestion for the partial arrangement of furniture in a room without a fireplace. The overstuffed chair and sofa are the most important modern contributions to furniture. They can be introduced in their various forms into any living-room, and, as in the group of furniture shown, make for solid comfort. In making provision for the placing of the furniture group in this sketch, the radiator will of course not be left exposed under the window



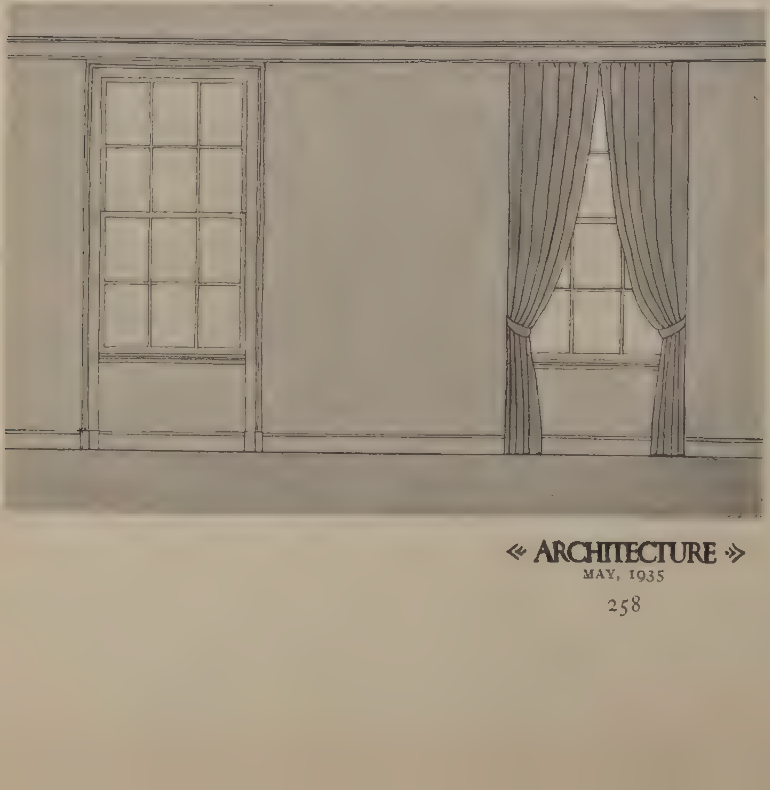
The draperies on most windows nowadays are hung out over the trim, covering it completely, unless the trim in itself is beautiful and is part of the architectural scheme of the room. When the window, as in the accompanying sketch, does not extend up to the cornice, there is a gap between the cornice and the top of the curtain that is almost always disturbing. This gap is made particularly apparent when the curtains are of a color contrasting with that of the wall, or are of a patterned material

matter) be near the centre of the room, and on the longer wall. And it makes for the greater comfort of the persons sitting near the centre of the room that doors on this fireplace wall, if there must be doors at all, be removed as far toward the ends as possible. And from the same standpoints, any unclosed openings in the walls of the room have little to be said in favor of them. They give the occupants of the room that uncomfortable sense of being not in a room at all but in a passageway. And they preclude all privacy, unless blocked with screens, and certainly do not help the appearance of the walls, particularly if they are off centre. As for the possible vistas they disclose from one room to another it is questionable whether the living-room is the place for vistas, or the dining-room either.

It is usually pleasant to enter the living-room from the hall through a door at one end of the room on the long wall opposite the chimneypiece; this is much better than entering through a centrally placed door—unless it be into a very large room—directly opposite the chimneypiece. And besides, the centrally placed door is taking up room that could be used to advantage for the arrangement of furniture.

* * *

In summing up the matter, the designer of a living-room that is going to make possible a comfortable, practical and æsthetically pleasing arrangement of furniture, will as far as possible avoid the following practices: The forcing of circulation through or around the space about the fireplace; the placing of the fireplace on the narrow wall of a long room; the placing of doors on centre that could as well be placed at the ends; and the creation of privacy-destroying vistas through large openings in the walls. In short, he will strive to make the room as livable as possible.

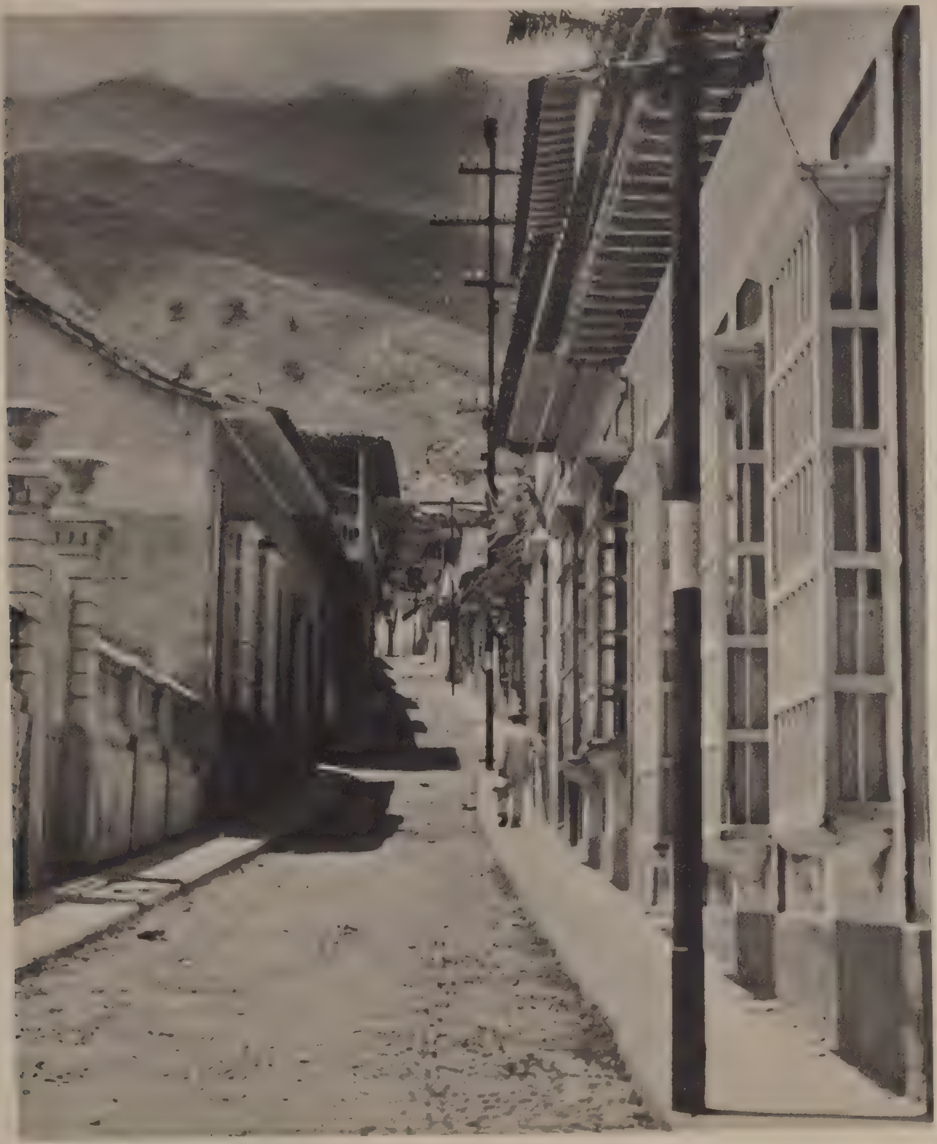


The windows that reach up to the cornice are more satisfactory from the standpoint of good design than those that stop part way up the wall, and this fact is made particularly apparent when the curtains are hung. And here again the vertical lines from floor to cornice preserve the architectural harmony of the design.

In boxing the radiators within the reveal of the windows—and this is a logical and good place for them—it is necessary that they shall not interfere, through their projection into the room, with the draperies. Kept inside the trim lines, or confined to a still narrower space if they project into the room beyond the face of the trim, they will avoid this difficulty

Wood Grilles of La Guaira

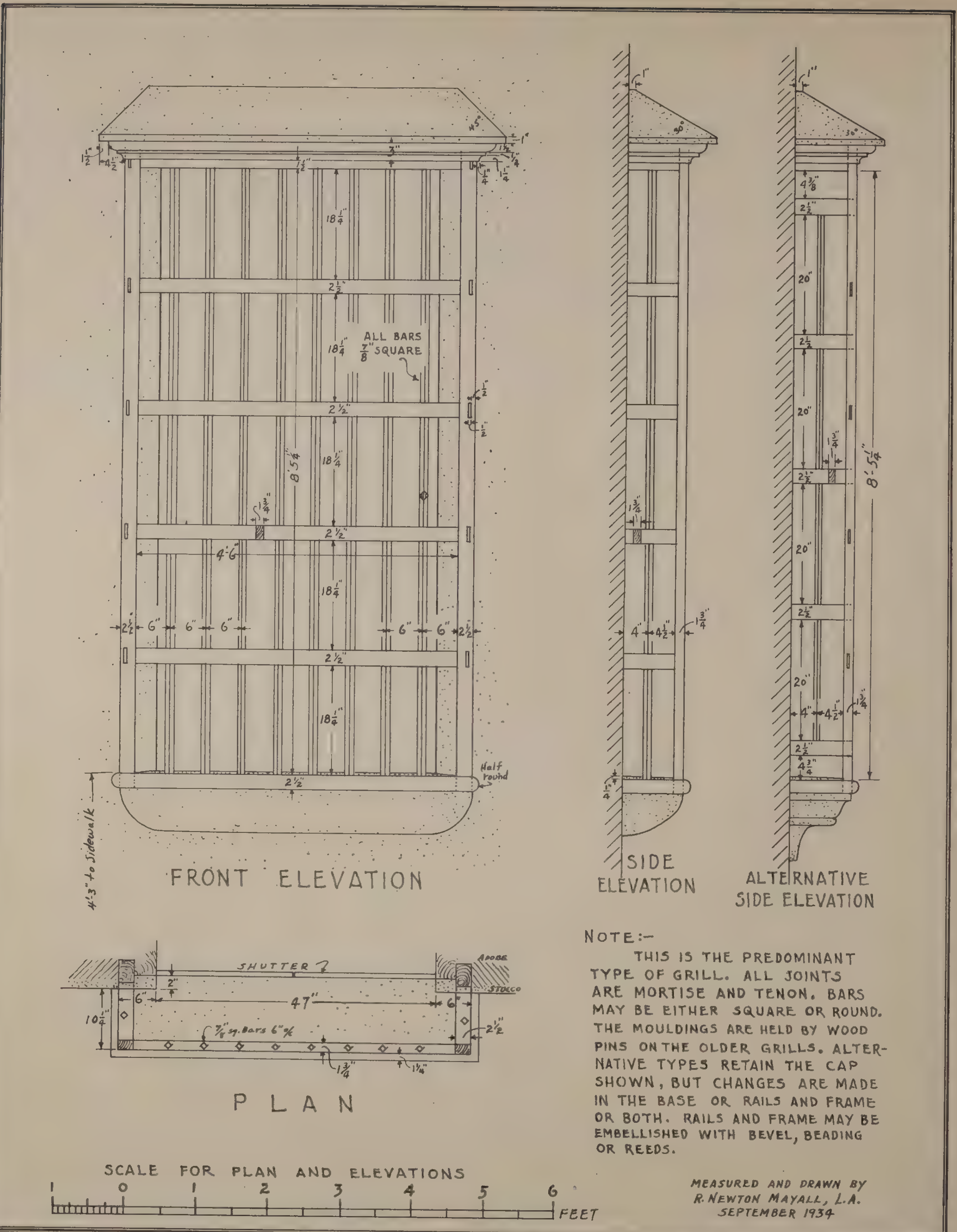
MEASURED, DRAWN, AND PHOTOGRAPHED BY R. NEWTON MAYALL



LA GUAIRA in Venezuela is a city of grilles. With Puerto Cabello on the same island and Santiago in Cuba it affords an interesting comparison in respect to this architectural feature. The three cities are bracketed because of the abundance of grilles in each, and the variety in design. Each city was settled by the Spanish; each had the same architectural influence; and each city today is a city of importance, either to its country or to the world at large.

La Guaira was founded in 1588, and since that time has served as a harbor for the capital. As one approaches from the north, the city has the appearance of being pushed into the sea, seeking refuge in a steep valley between the mountains. Although an important seaport in Venezuela, La Guaira is merely a stopping place where transient visitors may obtain speedy and comfortable transportation to Caracas or nearby seaside reports. Thus it remains attractive, antiquated, quiet, and unmolested. Many of its streets are so narrow that one can stand in the middle and touch the walls on either side with finger tips. The streets ascending the valley are built in a series of long ramps. In the vista along any one of these, innumerable wood grilles may be seen projecting over the sidewalks.

It is interesting to compare the grilles of

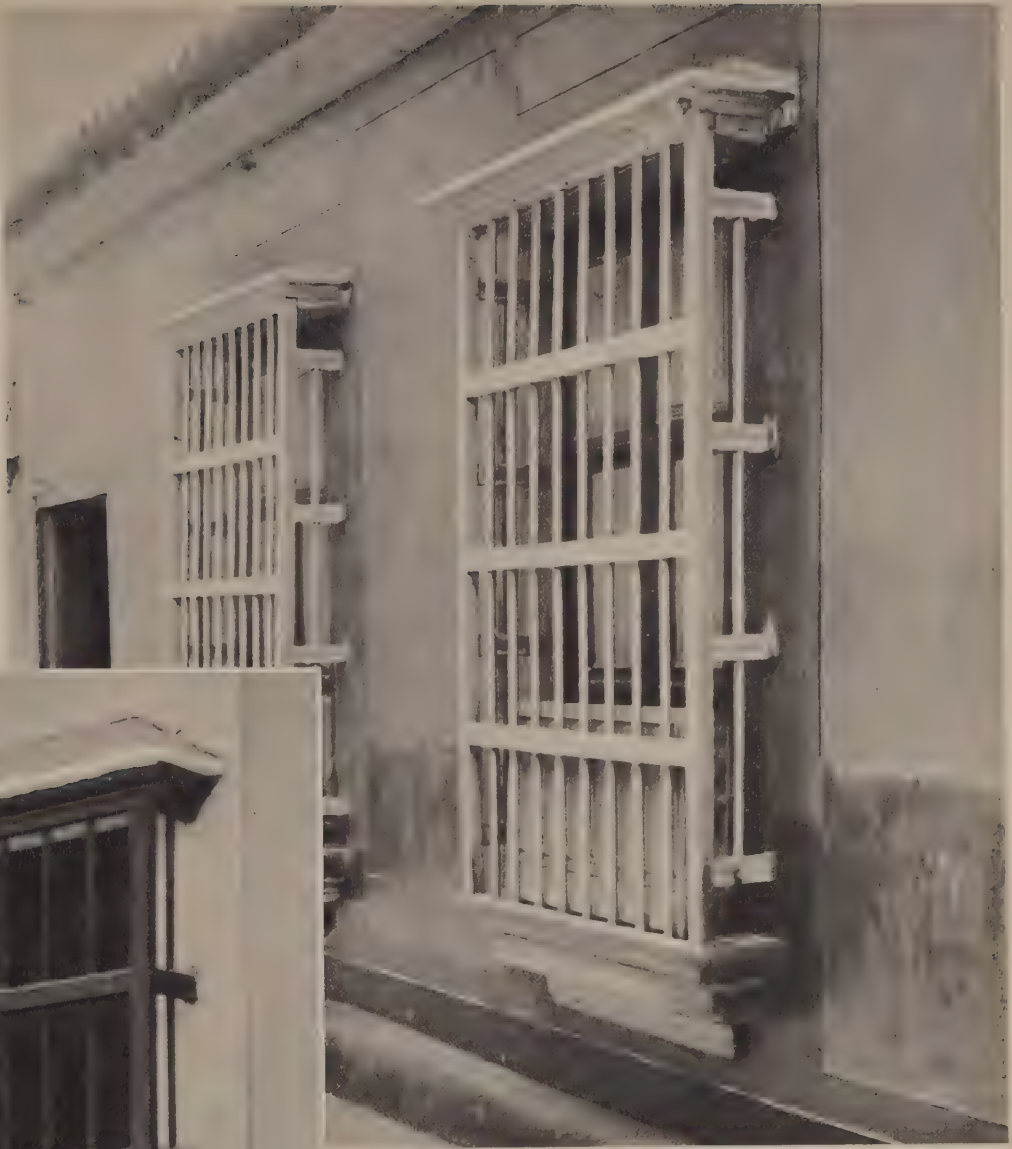


NOTE:–
THIS IS THE PREDOMINANT TYPE OF GRILL. ALL JOINTS ARE MORTISE AND TENON. BARS MAY BE EITHER SQUARE OR ROUND. THE MOULDINGS ARE HELD BY WOOD PINS ON THE OLDER GRILLS. ALTERNATIVE TYPES RETAIN THE CAP SHOWN, BUT CHANGES ARE MADE IN THE BASE OR RAILS AND FRAME OR BOTH. RAILS AND FRAME MAY BE EMBELLISHED WITH BEVEL, BEADING OR REEDS.

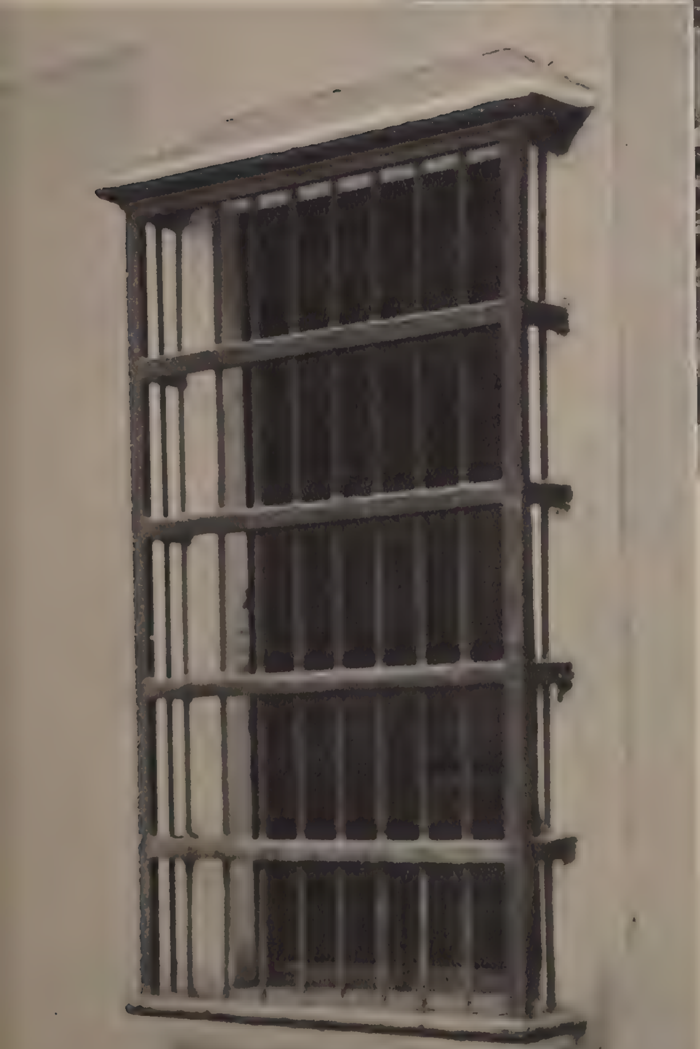
MEASURED AND DRAWN BY
R. NEWTON MAYALL, L.A.
SEPTEMBER 1934

WOOD GRILL · LA GUAIRA, VENEZUELA

An example of the predominant type

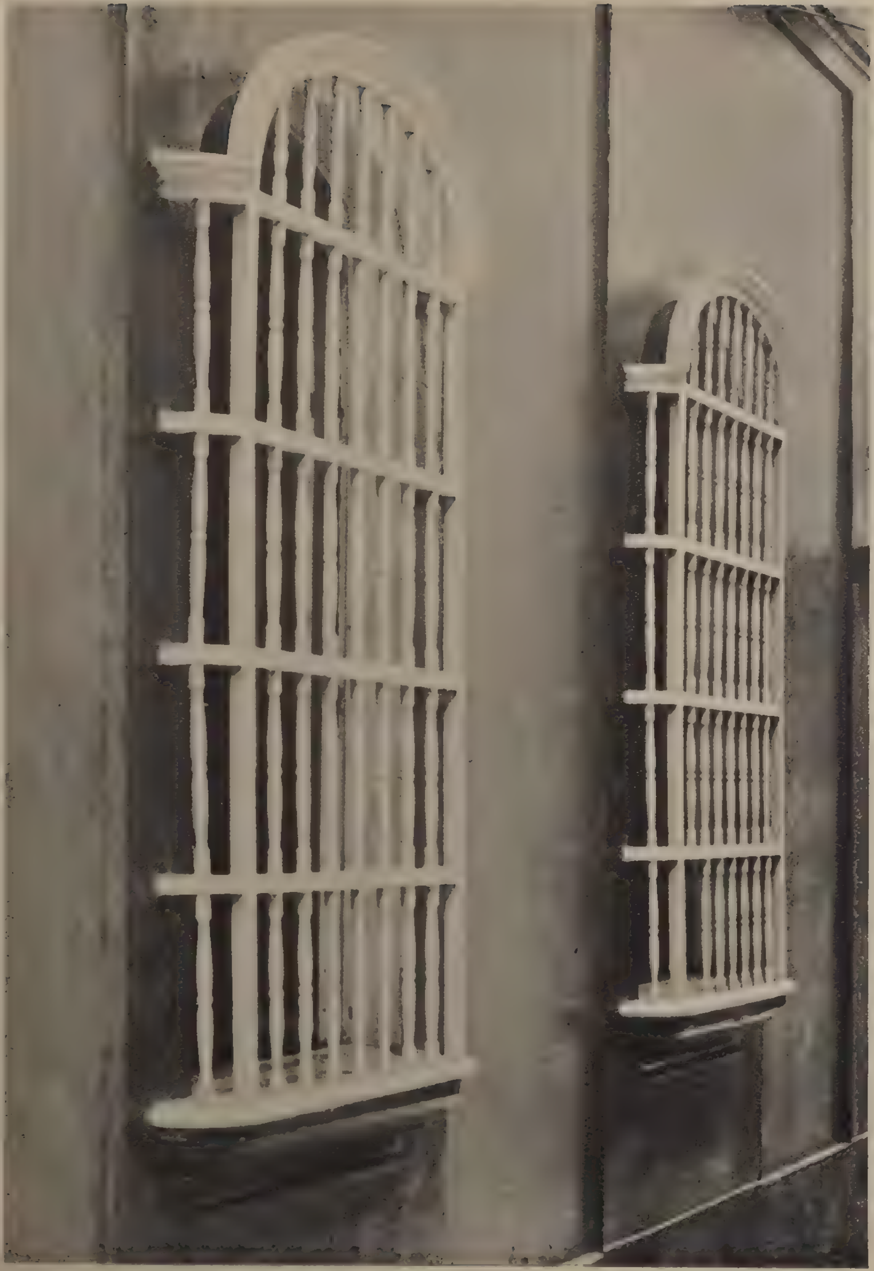


Alternate example of the predominant type shown in the drawing opposite in the alternative side elevation

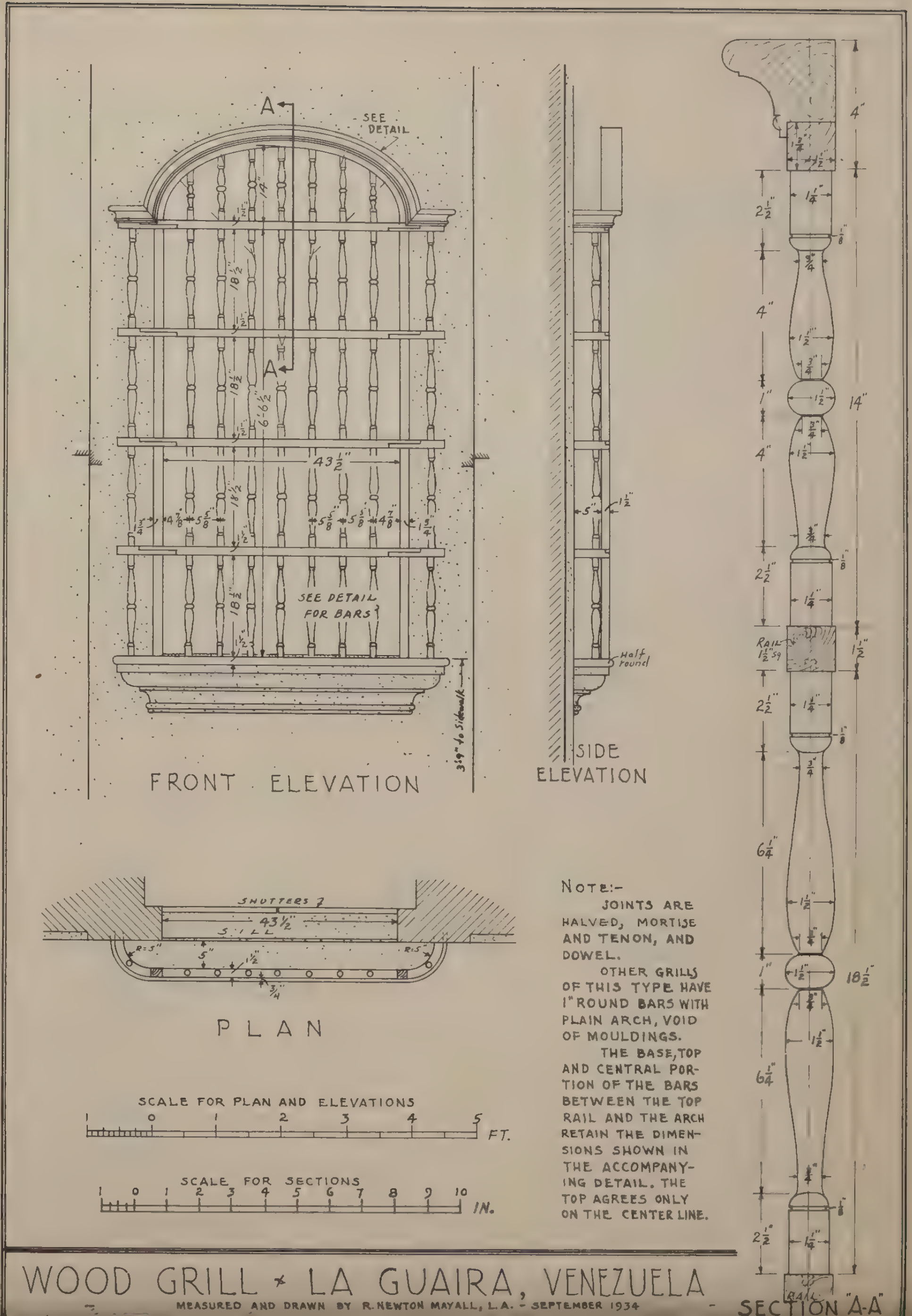


Santiago (ARCHITECTURE for November, 1934) with those in the Venezuelan cities. In Santiago the predominant type contains turned bars, while that in La Guaira has square bars. The grilles in Santiago rest on plain platforms or bases and have tile roofs, with little if any cornice. Those in La Guaira rest on molded bases, have molded roofs of adobe and stucco, and the cornices are far more elaborate in the number of their members.

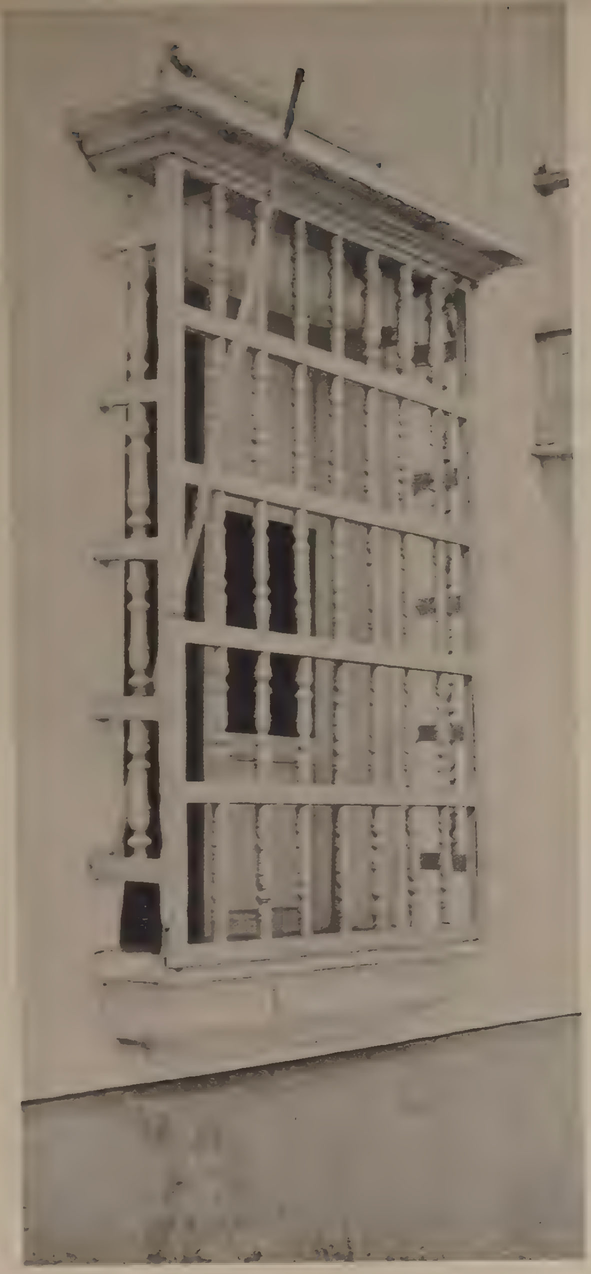
This is the typical example shown by the drawing on the facing page



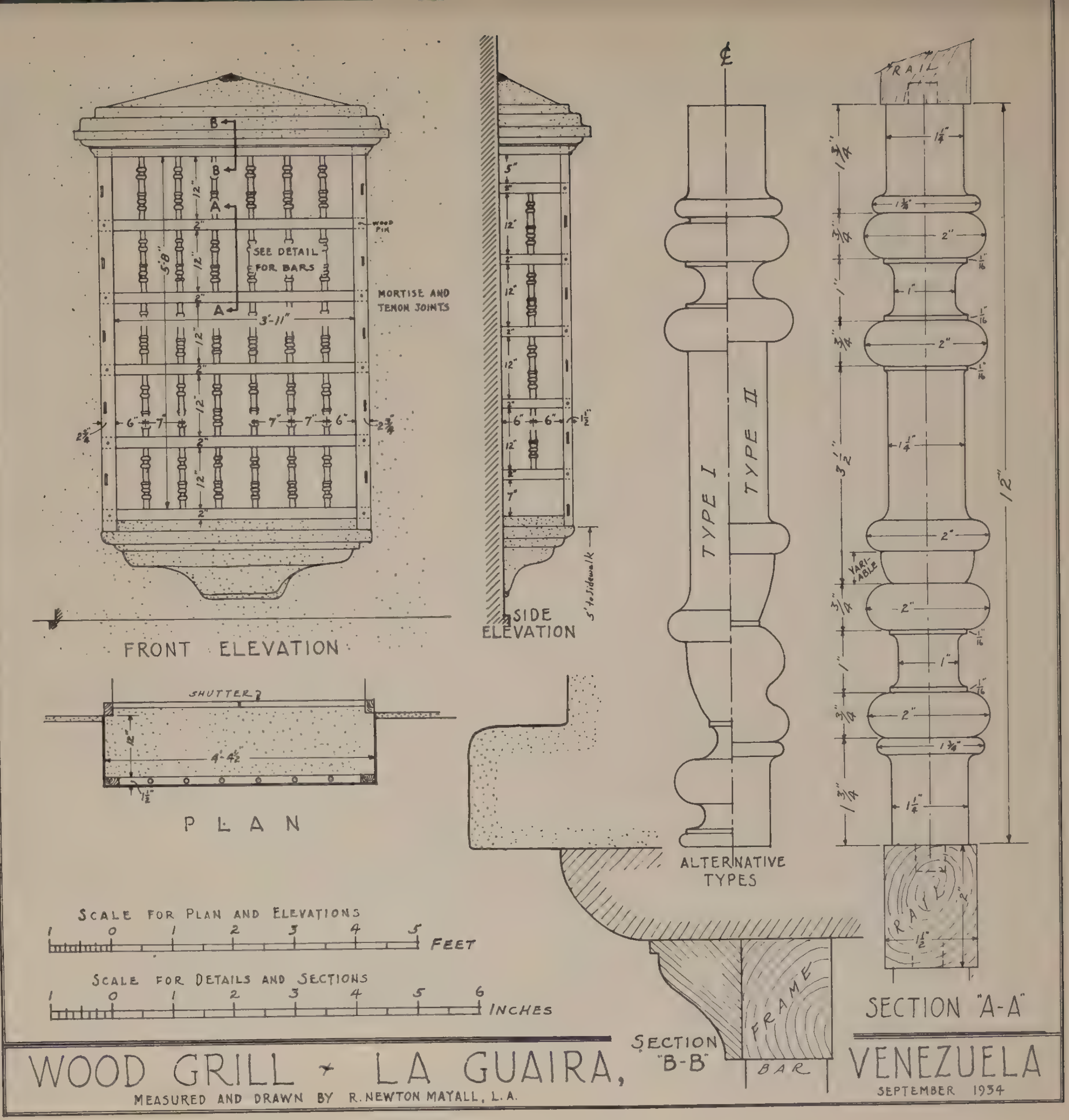
The photograph and its accompanying detail show one of the more elaborate types

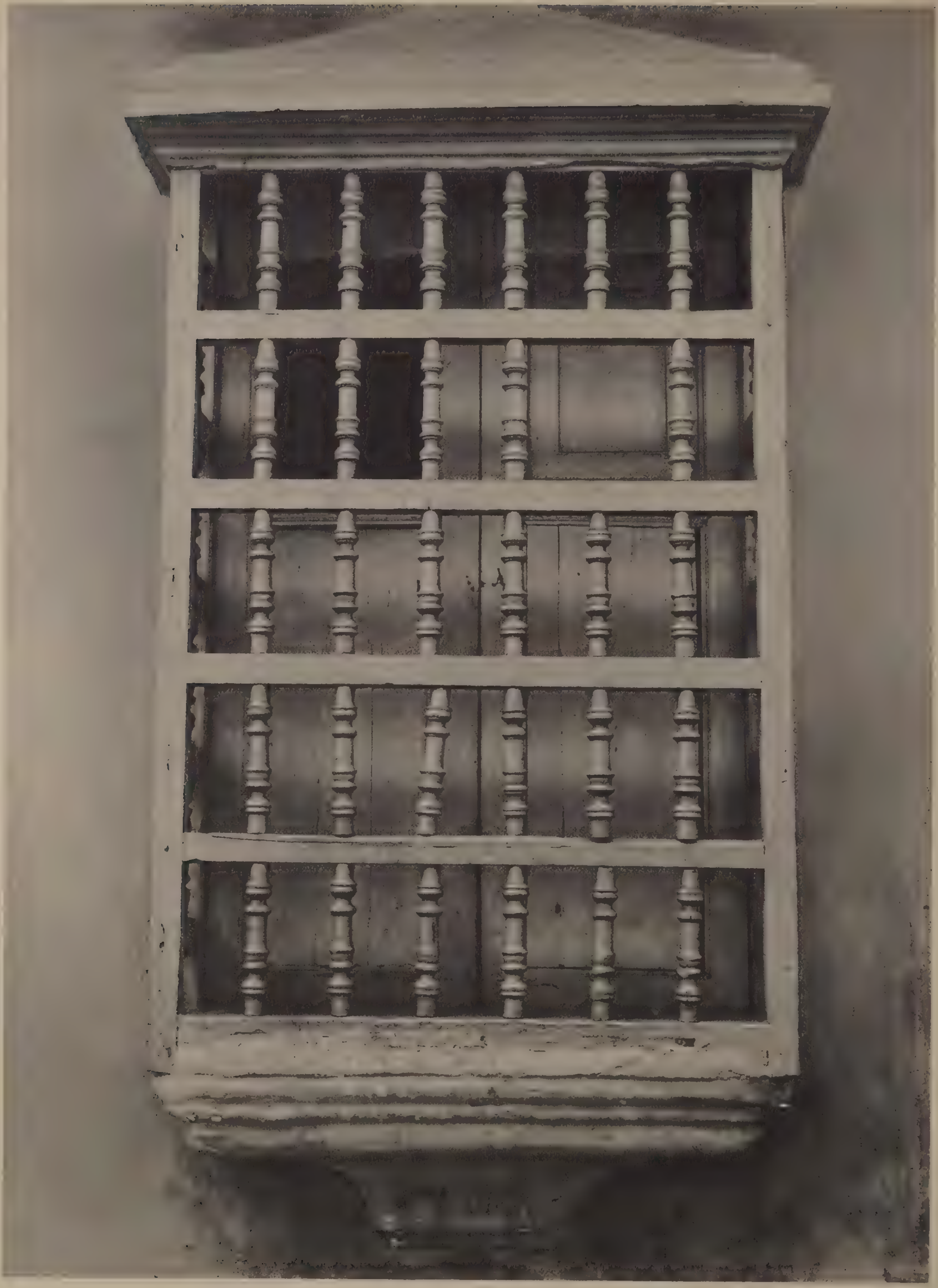


SEE DETAIL
A
A
43½"
18½
6'-6½"
14
5"
1½"
SEE DETAIL FOR BARS
3'-9" to Sidewalk
FRONT ELEVATION
SIDE ELEVATION
Half round
SHUTTERS
SILL
43½"
R=5"
¾"
PLAN
SCALE FOR PLAN AND ELEVATIONS
FT.
SCALE FOR SECTIONS
IN.
Note:-
JOINTS ARE HALVED, MORTISE AND TENON, AND DOWEL.
OTHER GRILLS OF THIS TYPE HAVE 1" ROUND BARS WITH PLAIN ARCH, VOID OF MOULDINGS.
THE BASE, TOP AND CENTRAL PORTION OF THE BARS BETWEEN THE TOP RAIL AND THE ARCH RETAIN THE DIMENSIONS SHOWN IN THE ACCOMPANYING DETAIL. THE TOP AGREES ONLY ON THE CENTER LINE.
4"
2½"
1¼"
1"
14"
6¼"
18½"
RAIL 1½" sq
SECTION "A-A"
WOOD GRILL × LA GUAIRA, VENEZUELA
MEASURED AND DRAWN BY R. NEWTON MAYALL, L.A. - SEPTEMBER 1934



Still another example (see also the following page)





The grille which is shown in detail on the preceding page

Better Practice

By W. F. Bartels

WALL BOARD

1—MATERIALS: Paper, Plaster

THE term wall board fails to indicate or even to suggest the variety of materials from which it is made, or the multiple uses in which it may advantageously be employed.

Because certain applications are highly successful, other equally satisfactory uses may be overlooked unless the architect keeps himself informed upon this ever-developing material. There should be no prejudice against the material itself simply because of inexcusable workmanship on a single job or two. Progress is so continuous and rapid that unless an architect newly acquaints himself at least once a year, he may miss the opportunity of securing bids low enough to carry the job through instead of having it remain a rolled-up project in the Disappointment Drawer.

Paper wall board is not as widely known nor as often used as are the composition boards of wood, plaster, cement, asbestos and other materials. It is limited in its use by nature and cannot compete with the others in strength and rigidity.

Plaster boards are as a rule made of gypsum plaster, covered with a tough paper which makes the surface suitable for painting and at the same time protects the plaster underneath from being chipped, scratched or broken out. The paper is wrapped around the edges of these boards and thus assures a uniform edge. Where plaster boards are used as a fire-retardent, a special board is produced without the paper finish. True to the name, plaster boards may be plastered with white plaster, or finished with paint or wall paper. Plaster boards are also used as the base upon which other finishes are mounted. Among the most popular of these are the wood veneers and their imitations. The wood veneers are cemented on the plaster board in much the same manner in which veneer is attached to wood cores. This veneer may be finished in any of the finishes ordinarily applied to wood. There are on the market coverings of paper which are applied to these boards. These papers are very clever imitations of the real veneers and they are difficult to detect except on close examination. These wood-appearing papers are sold at about one-quarter the cost of the real veneer. A finish may be obtained to resemble marble, as well as several woods. Then there is a plaster board with indentations so made that it resembles tile. This board can be painted and so result in "tile" of any desired color.

Composition and Fibre Boards

The makeup of composition and fibre board varies greatly. Almost every substance having a suitable fibre has been used for making these boards: cane fibre, corn stalks, wood fibre, asbestos fibre, synthetic fibre and wood fibre mixed with mineral matter. Some of them started out as by-products to use up the waste of industry, but some have now become their manufacturer's mainstay. Also there are the various cork-boards, made not so much to serve as structural boards, but as insulating and sound-deadening agents. They are made of both whole and granulated cork, pressed and treated so as to be insect- and vermin-proof.

The composition boards are for the most part treated to make them fire-resisting, vermin-proof, and resistant to dampness and water—although it must be appreciated that this is a big order, because many of them include wood fibres.

Denser Materials

What might be termed the denser materials are those which, because of their composition and makeup, are better enabled to withstand more weathering or abuse, such as knocks and scratching. This is a reason for preference being shown to the harder wall board of fibre and composition for certain uses. First in the group of denser boards might be mentioned those made with asbestos and finished in either a rough or smooth surface. These boards are made for utilitarian purposes, but the smooth boards have the added feature of smooth surface to their credit, and so are used in many places where such a finished surface is necessary or desirable. The asbestos product cannot be considered a cheap board, particularly if it has a smooth finish of its own or has a surface applied to it as will be described shortly.

Asbestos sheets are in some cases furnished with a finish to simulate tile or marble. This is very cleverly done by means of expert photographic processes, and excellent imitations are obtained. Tile surfaces are also obtained in this asbestos material and as such serve a very useful purpose.

Formica is made of fibre and a phenolic binder, with a highly reflective surface. This material may be obtained in practically any design desired, and by means of photographic reproduction; any range of color or color combinations may be had. Micarta, a similar substance, also enables one to obtain practically any color or design.

Zenitherm is a wood fibre plus magnesium oxide added under the proper conditions. The result is a textured material obtainable in many colors. It gives an effect of warmth, but is rather expensive for extensive use in private work. Compared with the usual wall board sheets (3′ by 12′), it comes in relatively small units.

Vitrolite and allied glass materials coming in large sheets are manufactured much in the same manner that glass is made, with color added or designs etched.

Metals

Metal in sheet form is of growing importance for both interiors and exteriors, and very likely will rapidly increase in importance as time goes on. These materials have qualities of durability and decorative effects which are worthy of attention. Effects in sheet metal are similar to those in other materials previously described, and are therefore included here in the broad classification of wall boards. Probably the most prominent metal is the now widely heralded rustless or stainless steel, which came into public consciousness through its use on several of the country's tallest buildings.

This steel is one so alloyed with chromium and nickel that it presents a surface which is at once rust-resisting and durable. The surface of this material is such that any number of finish effects can be produced, from the very brightest to a dull, non-reflecting surface.

Besides this material there is another form of steel and other rust-resisting metals to which some form of enamelling has been applied. When this process is employed on an indented sheet to simulate joints, the result is a very good imitation of tile, and it may be used in many places where the use and installation of tile would not be feasible.

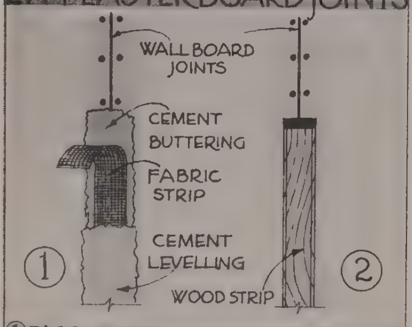
Of late it has been found practicable to make wood veneer adhere perfectly to sheet steel (excellent for elevator cabs), thus giving the fine effect of a wood finish with all the strength, rigidity, protection, and fire-proof qualities of steel walls. Wood veneer can be and is cut one eighty-third of an inch thick and made to adhere so tenaciously to galvanized metal that when pulled apart in the testing laboratory the galvanizing coat will peel from the metal and adhere to the wood!

* * *

2—USES OF WALL BOARD

Paper wall board has many uses. It may be used to smooth out surfaces over which another material is to be applied. It may be used to level hollow spots in old roofs before the new roofing is applied, so that the new roofing will slope evenly and so drain properly. Temporary stalls or booths can be made from this material at very little expense. It can be used in dry places to cut off air flow and obtain insulating effects, such as on the underside of roof beams, etc.

2A PLASTERBOARD JOINTS



①FABRIC REINFORCING STRIP
②PLAIN OR MOLDED WOOD (OR METAL) STRIP

Plaster board has an almost infinite number of uses. It can be used in practically all places where there is no dampness, which might tend to make it disintegrate. It can be used by itself, leaving the cracks open or filling them with a plaster or a calking compound. Or the cracks can be filled and finished off by having a fabric pasted over them, or by having them covered with a wood or metal strip (Fig. 2A). The boards may be sized, then painted or craftexed. They can be obtained with a genuine or imitation wood veneer on the exposed surface. And of course their use as a base for the final or white plaster coat must not be forgotten. Their use in this connection saves the dampness, waiting, and inconvenience of the scratch and brown coats otherwise necessary. Like the others these boards are carried in convenient standard widths and lengths. Their thickness varies somewhat, although not considerably. It should be remembered that these boards seldom run as thick as one-half-inch, while the total thickness of lath and plaster on a wall is probably nearer an inch. This will be a factor in their insulating value as compared to a regular plastered wall. This too will affect the acoustic properties. A lime-plastered wall will not be as hard nor as resonant as one of plaster board. These objections can be overcome by proper insulation and proper construction.

* * *

Uses of Composition and Fibre Boards

Composition and fibre boards also have innumerable uses. They are invaluable for temporary or permanent partitions, and for finishing off rooms. For insulating, such as on the underside of beams, and in fact for use in almost any place where they stop air flow, they are valuable as insulation aids. For use as temporary tops for tables and desks, and for lining the backs of shelves, they are of real use. These boards may be used in place of sheathing on a frame house, and for the interior of either brick or frame dwellings. Cork boards are often attached to ceilings as well as to walls, where it is desired to reduce sound and noise. This material can be used on doors, or in fact almost any place. It may also be used to keep heat in or out, being very valuable as an insulating material. Most varieties of cork board may be plastered upon and offer a suitable bond for the plaster.

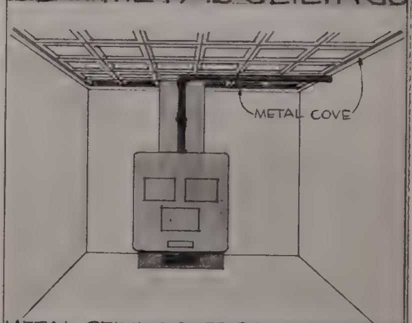
There is on the market an asbestos board called "transite" which is highly resistant to heat and is used with good results in preventing heat losses. It has a smooth finish and presents a surface which is so admirable it needs no covering. It resists the weather with impunity, as was shown in its use for most of the exterior walls in the recent Chicago Exposition buildings.

* * *

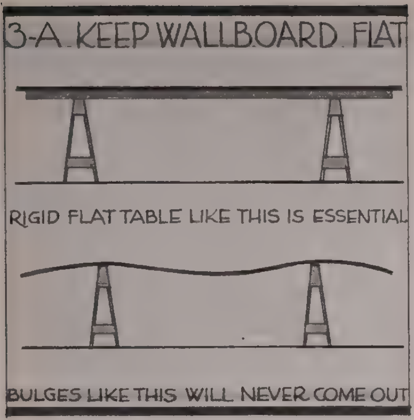
The asbestos board finished to simulate tile can be used advantageously many times in remodelling work where the debris from the real tile or marble work would be objectionable. Then too, being much lighter than tile or marble, there might be places where the weight of the latter might forbid their use. The cost of asbestos board tile is not considerably less than tile itself, but the labor to install is generally less costly and can be done more quickly. While these materials can stand ordinary cleaning and exposure to water, it is better not to expose them to the elements without the specific authority of the manufacturer.

Formica and Micarta might in many cases be substituted for marble and glass. They are highly resistant to many of the substances which an ordinary finish, such as paint or varnish, would not be able to withstand. Their uses have lately come into prominence by the emphasis given them by modern architects who have employed them where, even if their counterpart of marble could have been used, the cost would have been high. Rounded forms and cast surfaces are also

2-B METAL CEILINGS



METAL CEILING OVER BOILER LESSENS POSSIBILITY OF CONFLAGRATION


3-A KEEP WALLBOARD FLAT

BULGES LIKE THIS WILL NEVER COME OUT

possible with these synthetic products.

Vitrolite and other structural glasses are exceptionally well adapted to toilets, operating rooms, etc., where cleanliness is essential and frequent washings with strong solutions is the order of the day. These "glasses," as they might be called, can be obtained in sheets or blocks and can be used for decorative wall effects as well as for strictly utilitarian purposes. They may also be used for exterior work, but here great care must be taken because the cold renders them very likely to snap even under a light blow. Extreme care must be taken in such cases to see that they are properly set—and that by a contractor with extensive experience.

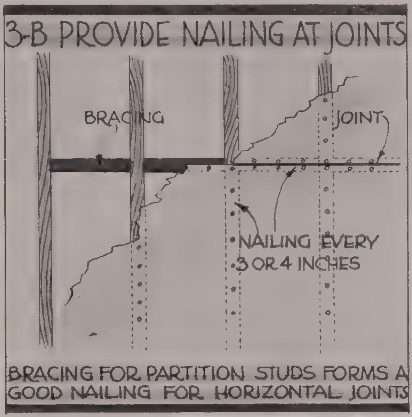
Metals

Metal walls of the stainless steel type for interiors are not only coming into prominence but are paying their own way, not alone by the assets of their inherent attractiveness, but by their reduced upkeep costs. Then there is the stamped metal of various designs that can be applied—and generally is—directly over the old plaster which may be getting weak and likely to fall at the drop of a hat. Another material is the type of metal required as one of the ways of fire-retarding the cellar ceilings of apartment-houses in New York, or as used over a boiler to lessen the chance of a conflagration from that source (Fig. 2B).

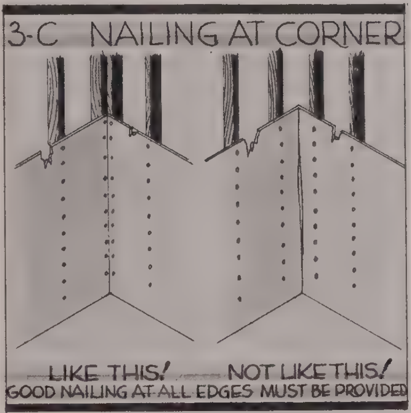
* * *

3—CONSTRUCTION

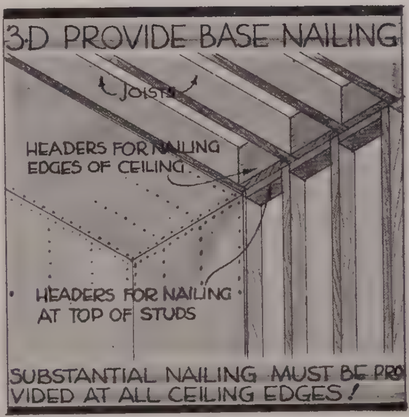
One of the most important points in wall board construction is that the material be properly stored and handled. A special place should be provided for it on the job, and facilities provided for all special and necessary cutting. So far as possible the board units should be left flat, else they will develop bulges which will defy nails to eliminate. A large solid table is desirable, and in no case should a carpenter be allowed to saw it over his knee or a single horse as many are prone to do if not specifically forbidden (Fig. 3A). Since many wall boards are new to workmen, the architect or superintendent may have to be able to give instruction on the best means of accomplishing certain work.

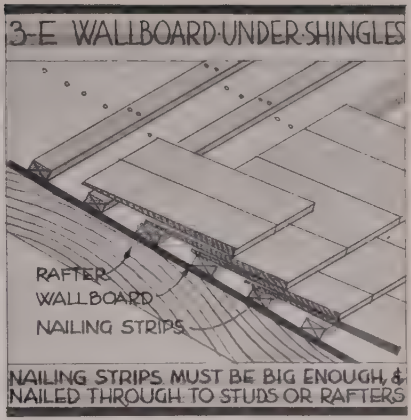

3-B PROVIDE NAILING AT JOINTS

BRACING FOR PARTITION STUDS FORMS A GOOD NAILING FOR HORIZONTAL JOINTS


3-C NAILING AT CORNER

GOOD NAILING AT ALL EDGES MUST BE PROVIDED


3-D PROVIDE BASE NAILING
JOISTS
HEADERS FOR NAILING EDGES OF CEILING
HEADERS FOR NAILING AT TOP OF STUDS
SUBSTANTIAL NAILING MUST BE PROVIDED AT ALL CEILING EDGES!

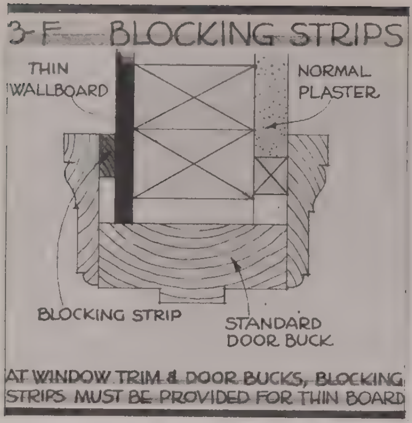

3-E WALLBOARD UNDER SHINGLES

NAILING STRIPS MUST BE BIG ENOUGH, & NAILED THROUGH TO STUDS OR RAFTERS

The architect should at all times try to visualize doing the erecting himself, and so make all members as easy to handle and saw as possible. Supposedly wall board would be inexpensive and effective because it comes in large sheets, but if the designer makes the workman cut it all up like strips of lumber, he had better use wood of the desired width. Incidentally, wall board does come in random widths for vertical panelling, and sometimes these units could be used horizontally for frieze purposes.

* * *

Whether the wall board be plaster or composition, it is necessary that a good foundation be provided for it. Whether the board is run horizontally or vertically, a sill under the studs should be provided. In fact this is good construction whether wall board or plaster is used. Then, unless the board goes all the way to the ceiling it will be necessary to provide intermediate nailing points in the form of bracing. This not only gives a nailing ground for the wall board, but is necessary for the proper installation of any partition (Fig. 3B). At the corners it is necessary to have the studs so placed that the ends of the boards may be securely nailed (Fig. 3C). So, too, the wall boards applied to the ceiling should have a nailing base for their ends, a particular one if they are to receive a coat of plaster (Fig. 3D). Furring that is to receive wall board must be securely fastened and in one plane, because it is difficult to iron out any unevenness in wall boards, such as is too often done in plastering. Where wall board is used as sheathing under shingles, nailing strips must be provided of


3-F BLOCKING STRIPS

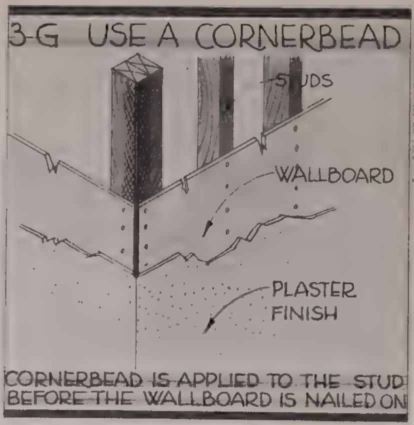
AT WINDOW TRIM & DOOR BUCKS, BLOCKING STRIPS MUST BE PROVIDED FOR THIN BOARD

sufficient size and thickness so that there will be no danger of the nails pulling loose (Fig. 3E). It is obviously unfair to put all nail-holding responsibility up to the wall board, which is much thinner than the average nailing strip. Furthermore the fibre composition of wall board is such that nails are apt to pull out unless they are deeply sunk in a solid ground. Blocking strips of proper sizes should be provided so that wherever panels overlap, as under windows, they may be blocked out, and so that the space between casings of doors and windows and the wall board may be properly filled out (Fig. 3F).

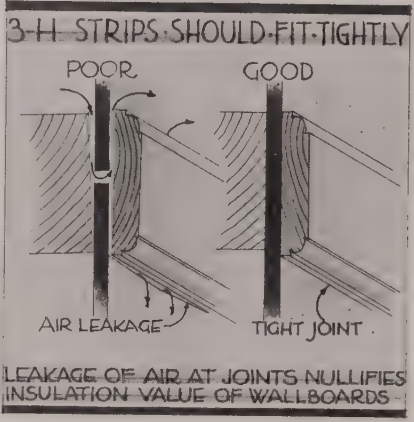
The joints of wall boards are important items—they will make or break the job. If the surface is to receive plaster, the joints should first be pointed up before the white coat is applied. On the corners it is preferable to use a corner bead, and this should be applied to the stud before the wall board is applied (Fig. 3G). For various solutions see article in April ARCHITECTURE, pages 181 to 187.

* * *

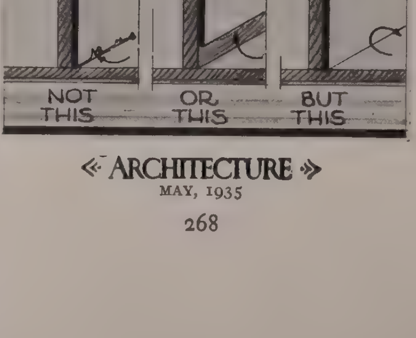
It must be borne in mind that, owing to the expansion and contraction of wall boards, it is practically impossible to get a flush joint that will not show sooner or later. By filling up the cracks with plaster a smooth surface may be obtained for a time but in all likelihood it is only for a short time—until the plaster dries thoroughly and the boards contract. Also, during humid spells the boards may buckle. So too with the various kinds of calking that may be attempted. It would seem then that the better procedure is openly to admit that a joint is necessary and cover this by one of the many decorative strip materials on the market. These of course do not have to run vertically, and by careful designing may add much to the attractiveness of the room. There is one thing against which the architect should be cautioned, and that is the nailing of a false strip without a proper support in back of the wall board to receive it. The result will be that in the future the strip will pull away, leaving an unsightly crack or gap. All strips should fit tightly over the joints so that air leakage at these points may be reduced to a minimum (Fig. 3H).

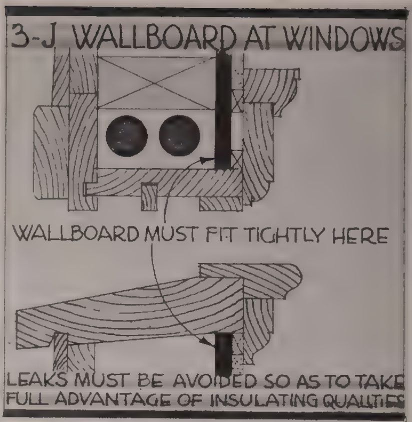

3-G USE A CORNERBEAD

CORNERBEAD IS APPLIED TO THE STUD BEFORE THE WALLBOARD IS NAILED ON


3-H STRIPS SHOULD FIT TIGHTLY

LEAKAGE OF AIR AT JOINTS NULLIFIES INSULATION VALUE OF WALLBOARDS


3-I WALLBOARD AT FLOOR


3-J WALLBOARD AT WINDOWS

LEAKS MUST BE AVOIDED SO AS TO TAKE FULL ADVANTAGE OF INSULATING QUALITIES

One of the chief selling points of wall board is its insulating value. It is up to the architect to see that he gets the full benefit of this property through proper installation. On the interior wall he should see that the board is carried down to the floor and that a tight fit is made here (Fig. 3I). No rough edges should be allowed. Where a wall board abuts a window casing it should go all the way to the jamb so as to reduce air leakage. Likewise at the head and sill of the window the board must fit tightly and the casing be securely fastened against it so that the air will be kept out (Fig. 3J).

* * *

In concrete form work wall boards are often used to give a smooth surface. In such cases they are laid over the regular forms and promote a smooth finish. In this way the wood forms do not have to be as tight and accurately matched as they would if they were to receive no top of wall board. If thought be given the joint between wall board units this ridge or groove may add to the decorative surface treatment of the concrete (Fig. 3K). If properly cared for, the wall boards may be used over and over again. Wall boards are very often used with most satisfactory results in the insulation of floors over cold areas, such as unexcavated portions of a building. Here they are placed between the rough and the finished floors.

The mechanic working on the job alone might wonder how he is to get the ceiling boards up without help. He can simplify this very easily by making a T of 2 by 4's to prop the one end of the board up while he works on the other end (Fig. 3L).

The nailing of wall board is most

important, and to a large extent upon this depends the success of the job. The boards must be nailed thoroughly around the edges as well as across the sheets. Screws would be better if they can be used, as they offer more resistance to pulling out, if the wall board exhibits a tendency to twist or bulge, as is often the case. Most wall boards should be nailed every three or four inches and, if finishing nails are used, alternate nails are driven in at opposite angles so as to hold the board better and keep it from warping.

* * *

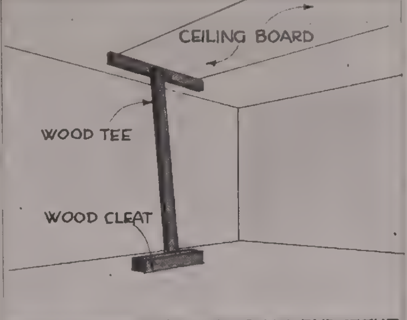
It must be remembered that the fewer nails or screws used, the greater will be be the strain on those that are present, and the greater likelihood that they will give and the boards bulge. Screws and nails with decorative heads may be obtained for this work. Where the wall boards are to be put over old plaster the mechanic should first find out where the studs are and snap chalk lines so that he will be sure he is nailing the wall boards to something solid. Extra long nails should be used for this work and they should have heads large enough to withstand any pull on the board (Fig. 3M).

Wall boards may be painted in the usual way as for any other material of similar nature. It is advisable however, first to give them a coat of size. The boards should be painted before the strips are put on, so that any shrinkage that may take place will not leave an ugly line along the edge of the covering strip (Fig. 3N).

Denser Materials; Construction

The cutting to size and shape is an important item of the more brittle boards which have a fine finish. This may be done with a fine saw, or preferably with a carborundum wheel. A sharp chisel may be used to line both sides and then the sheet may be broken like a pane of glass, but care must be taken in this procedure. Where a circular cut is desired a plumber's trick may be used, *i.e.*, taping one end of a hacksaw blade and using it to cut the curves and irregular lines (Fig. 3O).

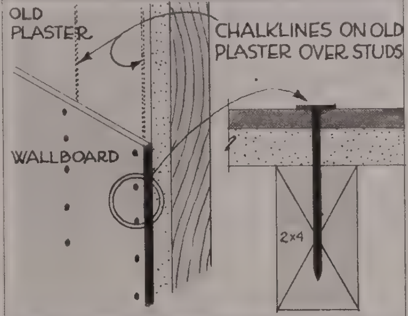
3-L INSTALLING CEILING BOARD



WOOD TEE CAN WEDGE UP ONE END OF THE BOARD WHILE WORKMAN NAILS OTHER END

Nail and screw holes are often better drilled than driven, and fewer split sheets and spoiled surfaces will result. Nail holes must be properly puttied with white lead putty.

3-M WALLBOARD ON OLD PLASTER



LONG LARGE HEADED NAILS MUST BE USED SO AS NOT TO PULL OUT EASILY

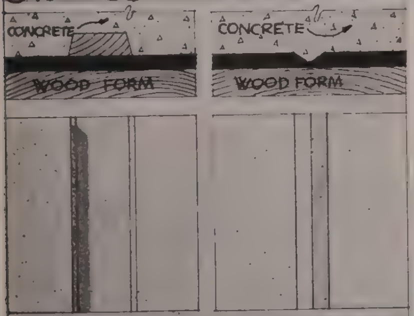
Where sheets abut flush and the joint is not covered by a molding, this joint should be filled with white lead (provided it is an asbestos type board) in preference to a plaster joint, which will contract. Many manufacturers of the various boards also sell bases, chair rails, joint cover strips, etc. But more often than not the architect will find in a millwork catalogue a molding which will suit his purpose and have a rabbet for holding the material—or otherwise a stock metal molding in the show window catalogue. In the use of the brittle sheets of imitation marble, tile, etc., a firm solid backing is absolutely essential to the success of the job. Cork is generally attached by means of a mastic or cement and must be firmly embedded. In the fastening of metal work, or in fact applying any material over plaster, it is essential that long screws or nails with heads large enough be provided, so that they will not draw out through the board used. Otherwise firm and permanent adherence to the foundation or studding may not be obtained.

The finishes that may be applied to the wall board may be practically any the architect wishes. On the wood veneers the treatment is the same as on any other veneer, while on the remaining work the precautions necessary for any decorating job will have to be taken.

* * *

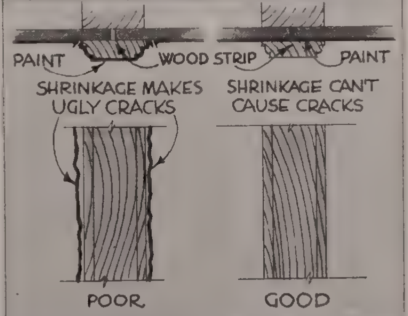
This article of Mr. Bartels' parallels and supplements the article "Wall Board Comes of Age" in the April issue of ARCHITECTURE, *with emphasis on the structural principles involved, Mr. Geerlings having discussed mainly matters of design.*
Next month, Better Practice deals with "Doors, Windows and Stairs."
—EDITOR.

3-K CONCRETE FORMS



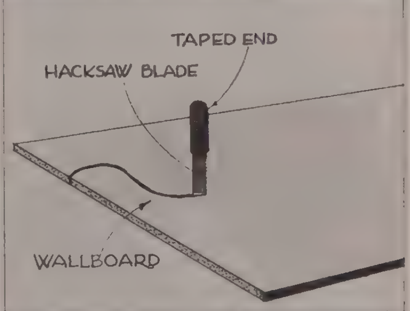
WOOD STRIP OVER JOINT FORMS GROOVE V-JOINT FORMS A RIDGE IN CONCRETE

3-N PAINT WALLBOARD FIRST



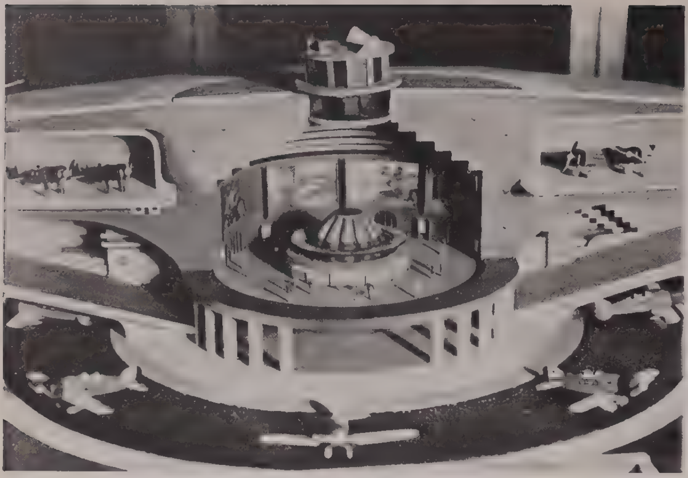
PAINTING WALLBOARD BEFORE APPLYING STRIPS WILL PREVENT UGLY CRACK LATER

3-O CUTTING CURVES

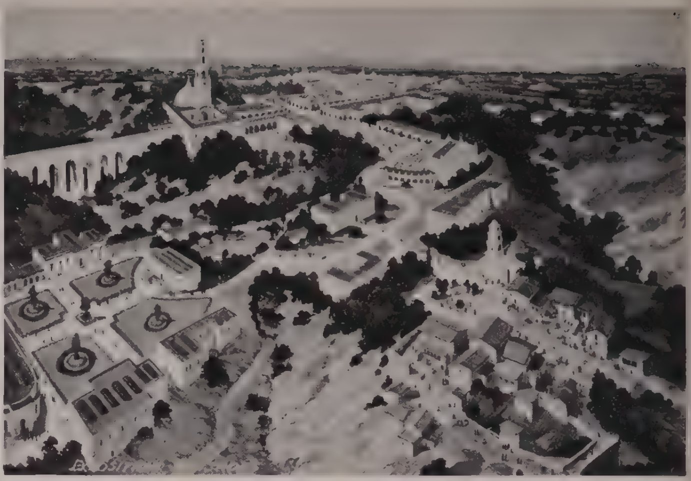


HACKSAW BLADE MAY BE USED TO CUT ALMOST ANY CURVE OR IRREGULAR SHAPE

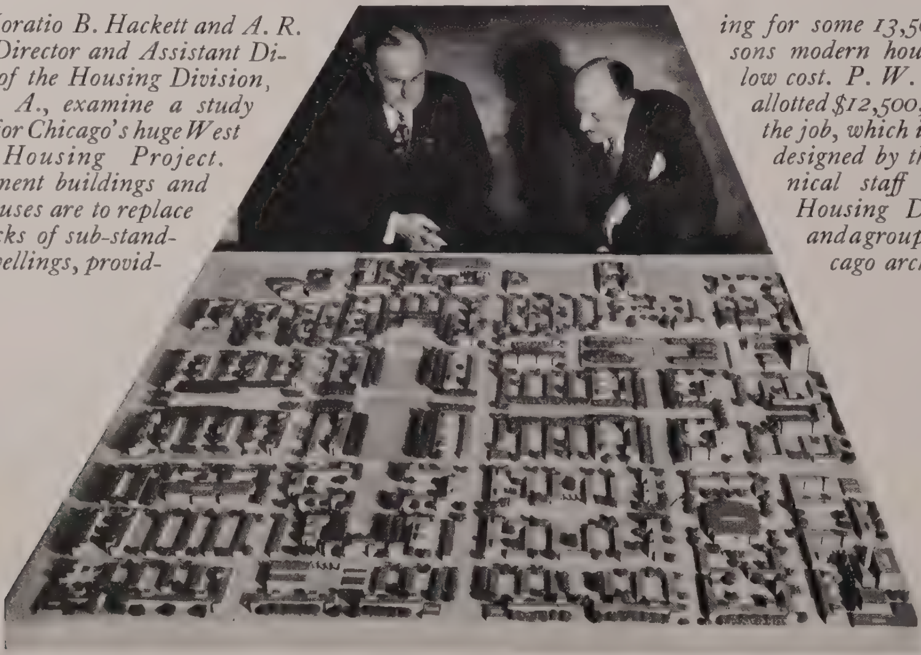
Architectural News in Photographs



A scheme devised by Dr. W. W. Christmas and developed by Harvey W. Corbett and Francis Keally, for air terminals to link air and ground transportation and the postal service. Planes land on and take off from a great mushroom top, reaching the underground terminal by ramps

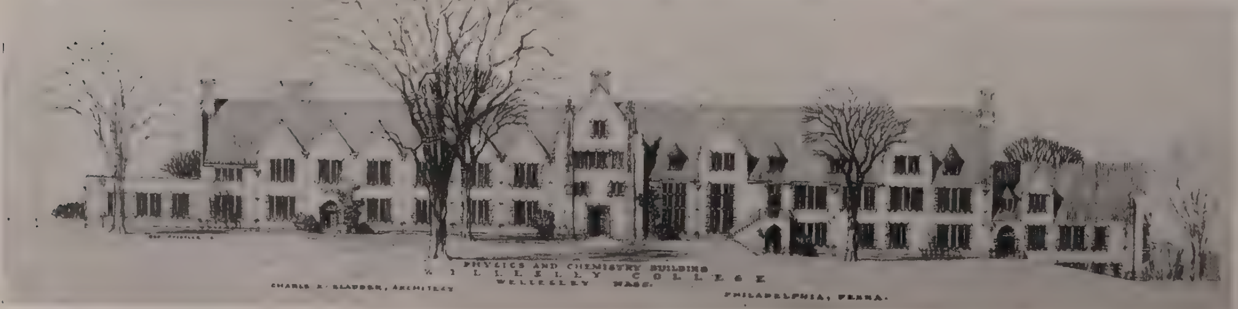


The California Pacific International Exposition building, at San Diego, is scheduled to open May 29. Again, as in the Exposition of 1915, the 1400-acre Balboa Park provides the site. Certain of the earlier buildings are again utilized—reminiscent of Bertram Goodhue's genius



Col. Horatio B. Hackett and A. R. Clas, Director and Assistant Director of the Housing Division, P. W. A., examine a study model for Chicago's huge West Side Housing Project. Apartment buildings and row houses are to replace 37 blocks of sub-standard dwellings, providing for some 13,500 persons modern housing at low cost. P. W. A. has allotted $12,500,000 for the job, which is being designed by the technical staff of the Housing Division and a group of Chicago architects

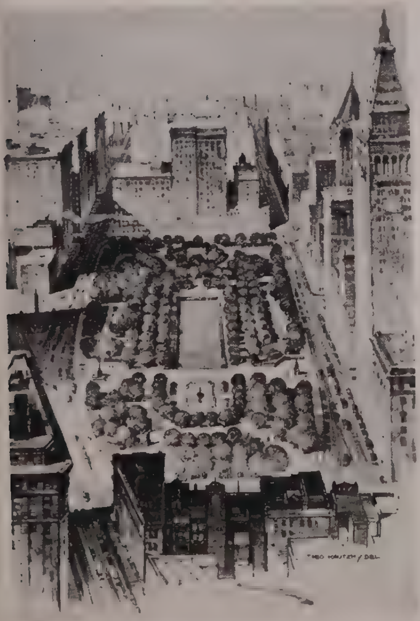
Preliminary elevation study of the Physics and Chemistry Building that is to be built for Wellesley College, Wellesley, Mass. Charles Z. Klauder, architect. Rendering by George Sponsler, Jr.

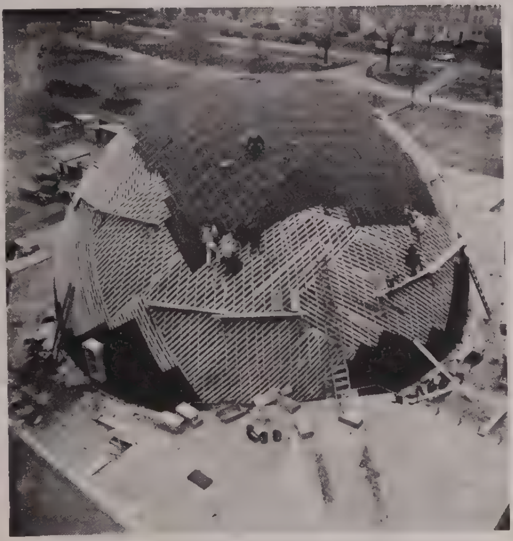


Proposed North Park College Memorial, Chicago, Ill. Godfrey E. Larson, Inc., architects. It will contain an auditorium to seat 1200, a basket-ball court, swimming-pool, and eleven classrooms

Grandstand of the Santa Anita Racetrack, California, situated in a park of 210 acres. Gordon B. Kaufmann, architect, has used color boldly

Under New York City's Department of Parks, a reconstruction of Madison Square will shortly be gotten under way

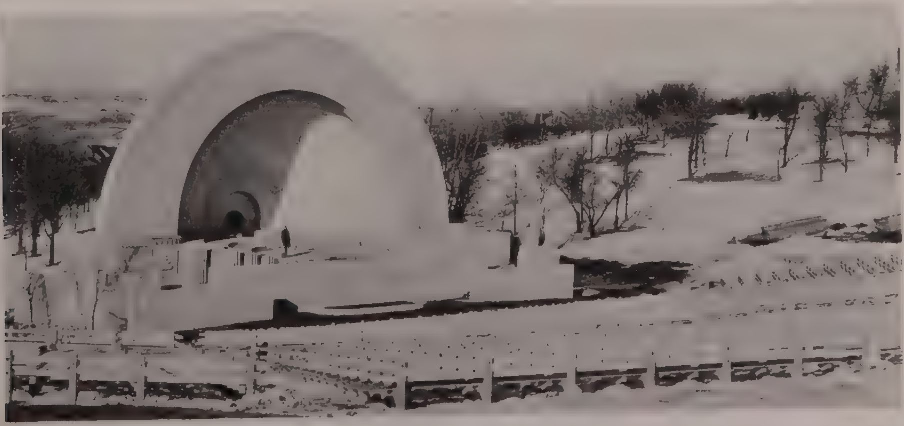




The Hayden Planetarium of the American Museum of Natural History, New York City. An outside shell of cement is insulated with rock cork, under which a thin steel perforated sheath gives a surface for the projection of celestial areas. The room is 75 feet in diameter and will accommodate 750 spectators. Trowbridge & Livingston are the architects

Demolition of the old Post Office south of New York's City Hall, will give the Park Department (for which Gilmore D. Clarke is consulting architect) another opportunity

Sioux City's new music pavilion, a great concrete shell in a natural amphitheater. The design, by Henry L. Kamphoefner, architect, was submitted in competition for the 1933 Paris Prize. It inspired the citizens to carry it through to reality



BOOK REVIEWS

MODERN HOUSING. By Catherine Bauer. 379 pages, 6 by 9¼ inches. Illustrations from photographs and plans. Boston: 1934: Houghton Mifflin Company. $5.

The Carnegie Corporation made possible this comprehensive survey of housing both here and abroad, but without Miss Bauer's wide knowledge of where to look and for what, coupled with an unusual feeling for balance and proportion, the book could not have been produced. Henry Wright has said that this is the best balanced survey of modern housing, particularly in respect to the work in other countries, that has been made. The author has attempted to present the fundamental bases, sociological, economical, and national, that underlie modern group housing, rather than the technical details.

WOOD-CARVING AS A HOBBY. By Herbert W. Faulkner. Foreword by Earnest Elmo Calkins. 140 pages, 5½ by 8½ inches. Illustrations from drawings. New York: 1934: Harper & Brothers. $2.

In these days when the better employment of leisure time is an end to be sought, Mr. Faulkner's excellent handbook on wood-carving should interest a wide circle of hobby riders. It would be difficult, possibly, to find any more pleasurable and at the same time instructive hobby for the architect. Materials, tools, methods, design—all are so ably presented that even the reviewer's hand itches for a chisel.

THE DISTRIBUTION OF SOIL PRESSURE BENEATH A FOOTING. By F. E. Giesecke, W. H. Badgett, and J. R. D. Eddy. Bulletin No. 43. 15 pages, 6 by 8¾ inches. Illustrated from drawings and a photograph. Pamphlet binding. College Station, Texas.: 1934: Agricultural and Mechanical College of Texas. Free while supply lasts.

ARCHITECTS' SPECIFICATIONS — How to Write Them. By Goldwin Goldsmith. 131 pages, 8½ by 11 inches. New York: 1935: John Wiley & Sons, Inc. $2.50.

Professor Goldsmith, of the University of Texas, has written this book mainly for use in teaching the architectural student. Nevertheless, there is abundant evidence here that even the experienced practitioner will find much in its pages to aid him in producing a far better contract document. Professor Goldsmith presents the basic principles of specification writing rather than mere sample phrases, which latter have probably been one of the chief weaknesses of architectural specifications in America.

DEPENDENCE OF SOUND ABSORPTION UPON THE AREA AND DISTRIBUTION OF THE ABSORBENT MATERIAL. By V. L. Chrisler. Research Paper RP700. 19 pages, 6 by 9 inches. Illustrations from graphs and a photograph. Pamphlet binding. Washington, D. C.: 1934: U. S. Department of Commerce. 5 cents.

EARLY MANOR AND PLANTATION HOUSES OF MARYLAND. By Henry Chandlee Forman. Introduction by Leicester B. Holland. 271 pages 8¾ by 11¾ inches. Illustrations from photographs and measured drawings. Easton, Md.: 1934: Henry Chandlee Forman: Obtainable from Maryland Manor Society. $10.

Most of the large manor houses of Maryland's early days have been measured, drawn, and published. Mr. Forman devotes his attention to the smaller houses and others of larger size hitherto overlooked. The book is well documented as to the historical background, and is particularly strong in its presentation of plans. The photographs, of which there are many, suffer to some extent by being rather small and marked by the distortion inherent in hand-camera work. Dr. Leicester B. Holland contributes an introduction commending Mr. Forman for his timely work in collection, research, and publication.

ROBERT MILLS—Architect of the Washington Monument, 1781–1855. By H. M. Pierce Gallagher. Foreword by Fiske Kimball. 233 pages, 6¼ by 9¼ inches. Illustrations from photographs, old prints, and drawings. New York: 1935: Columbia University Press. $4.50.

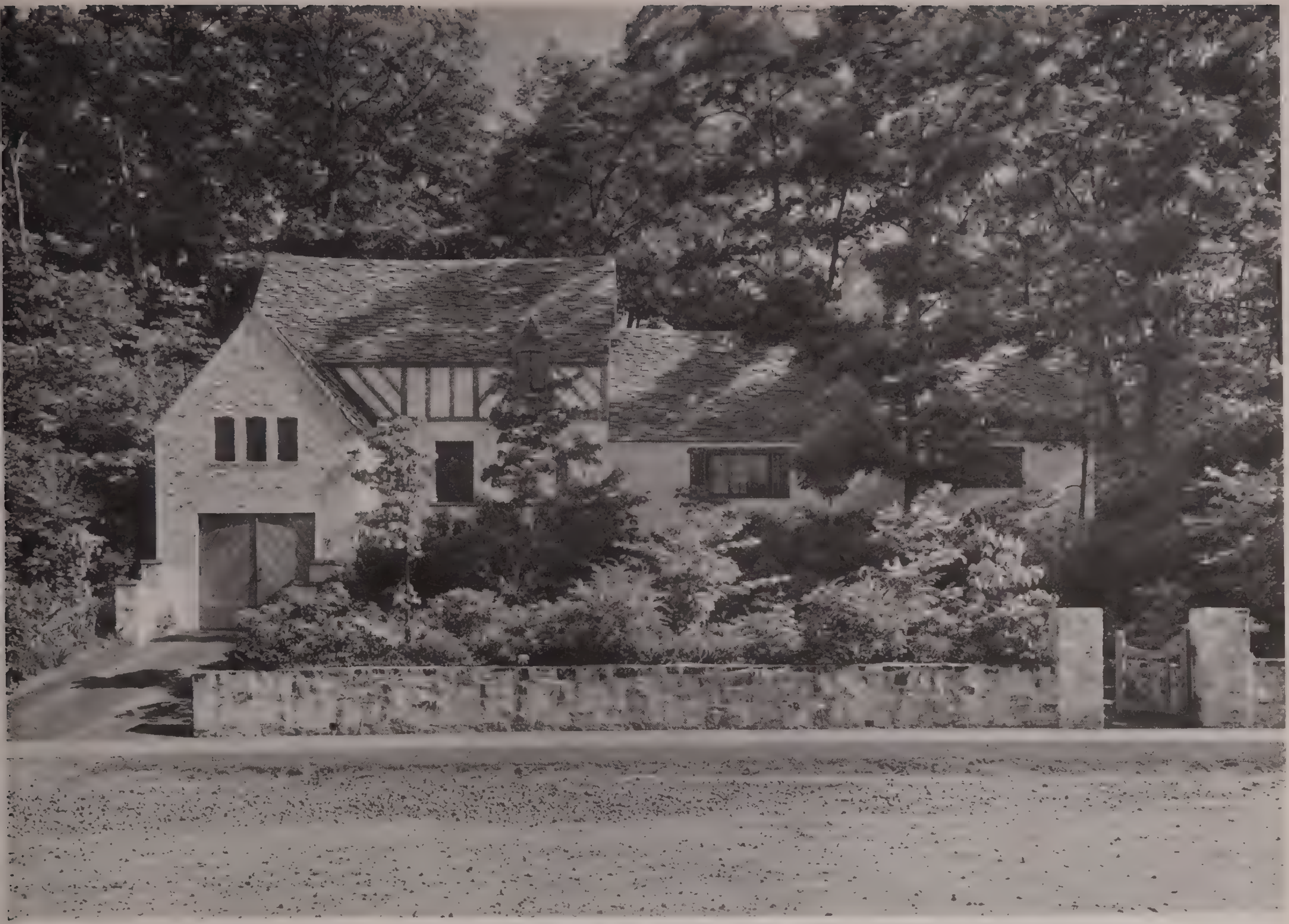
America is showing some signs of awakening interest in the men who designed her early architecture. Robert Mills, as our first native-born architect regularly trained for the profession, deserves to be remembered by his countrymen, and not alone for the Washington Monument. Mrs. Gallagher has spent many years in what must have been an extremely difficult task of research among scattered and far too sketchy documents, developing this image of a forgotten architect.

MEDIÆVAL TOWN PLANNING. By T. F. Tout. 34 pages, 5¾ by 9 inches. Illustrations from old prints. Pamphlet binding. Manchester, England: 1934: The Manchester University Press. 2 shillings.

There is not a great deal that the town planner of today will learn from the Mediæval *bastides* and "new towns"; they were built primarily as strongholds, without much thought of sanitation, social welfare, and the other important considerations of today. Nevertheless, as a matter of history and representing early solutions of a slowly changing problem, Doctor Tout's pamphlet is a welcome contribution.

MANUAL OF FIRE-LOSS PREVENTION OF THE FEDERAL FIRE COUNCIL. National Bureau of Standards Handbook No. 19. 156 pages, 5 by 7½ inches. Illustrations from drawings. Pamphlet binding. Washington: 1934: U. S. Department of Commerce. 20 cents.

The principles on which fire resistance classifications are based, general methods for controlling the spread of fire through structural provisions and by fire-extinguishing equipment, and general fire-prevention measures possible as maintenance provisions.



Photographs by Robert MacLean Glasgow

HOUSE OF DR. FRANKLIN EDGERTON

NEW HAVEN, CONN.

Frank J. Forster

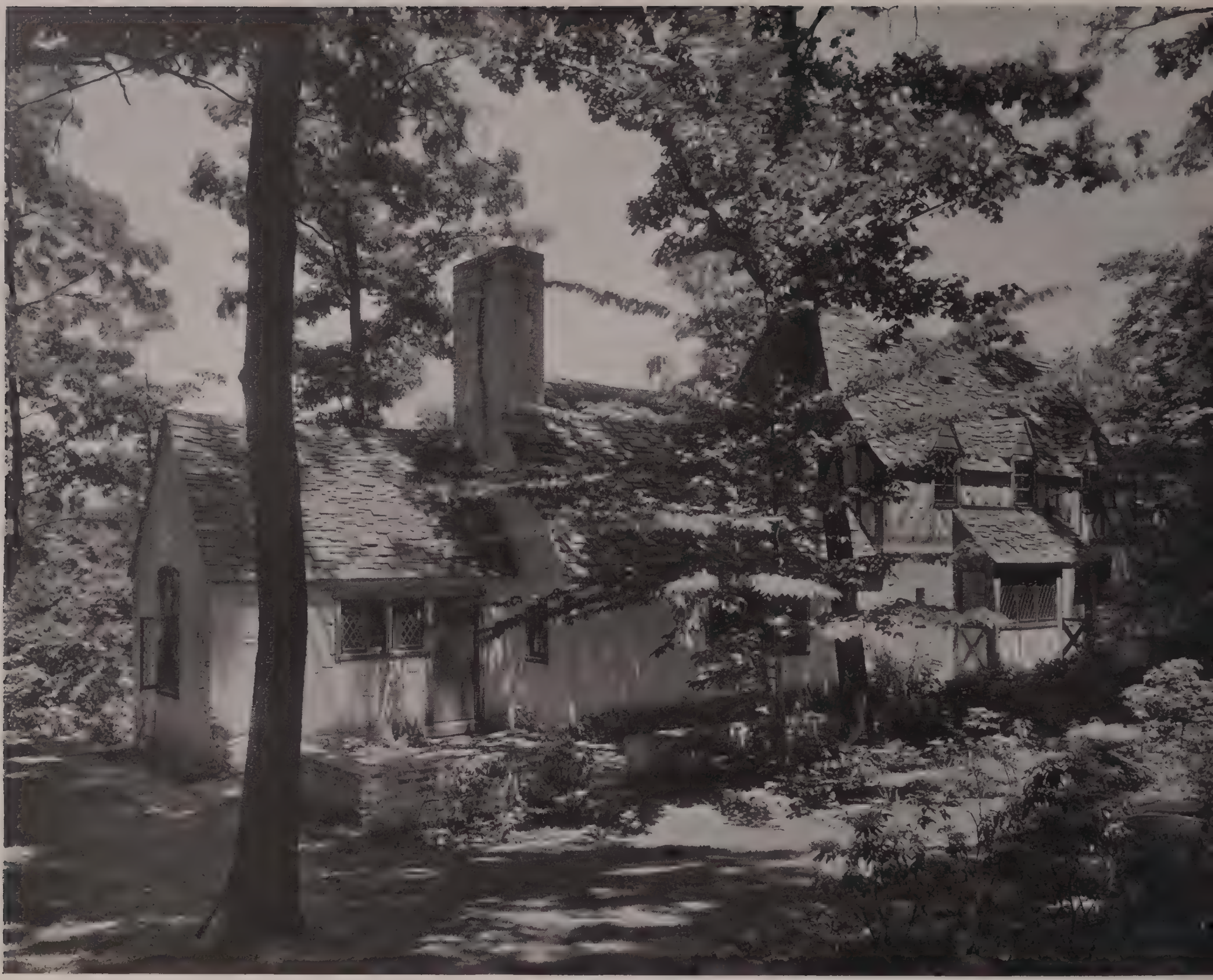
ARCHITECT

"In meeting the problem of a difficult site, a limited budget, and adequate accommodations for the family, this house typifies my most successful small house."

FRANK J. FORSTER

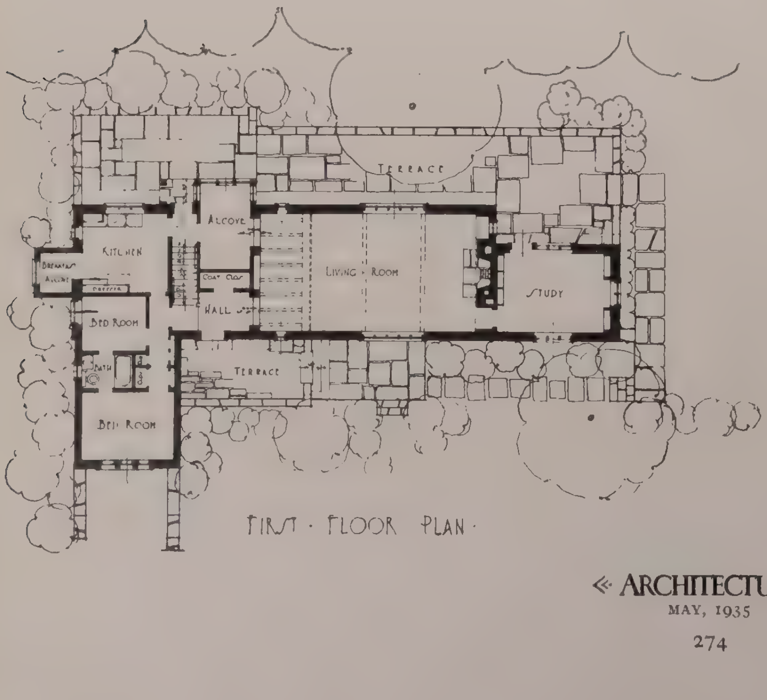
In view of the fact that the architectural profession will unquestionably devote more of its energies during the next few years at least to the design of the small house, we have asked one hundred architects to send us, each, the best small house that he has designed. These will be published from time to time during the coming months, and should prove a source of information and inspiration in this field.—Editor

ONE HUNDRED SMALL HOUSES

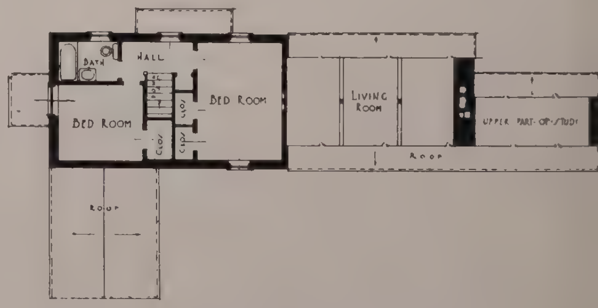


Walls are of solid brick construction, with a restrained use of oak timbering—all whitewashed. Roof is of slate in weathering greens and purples

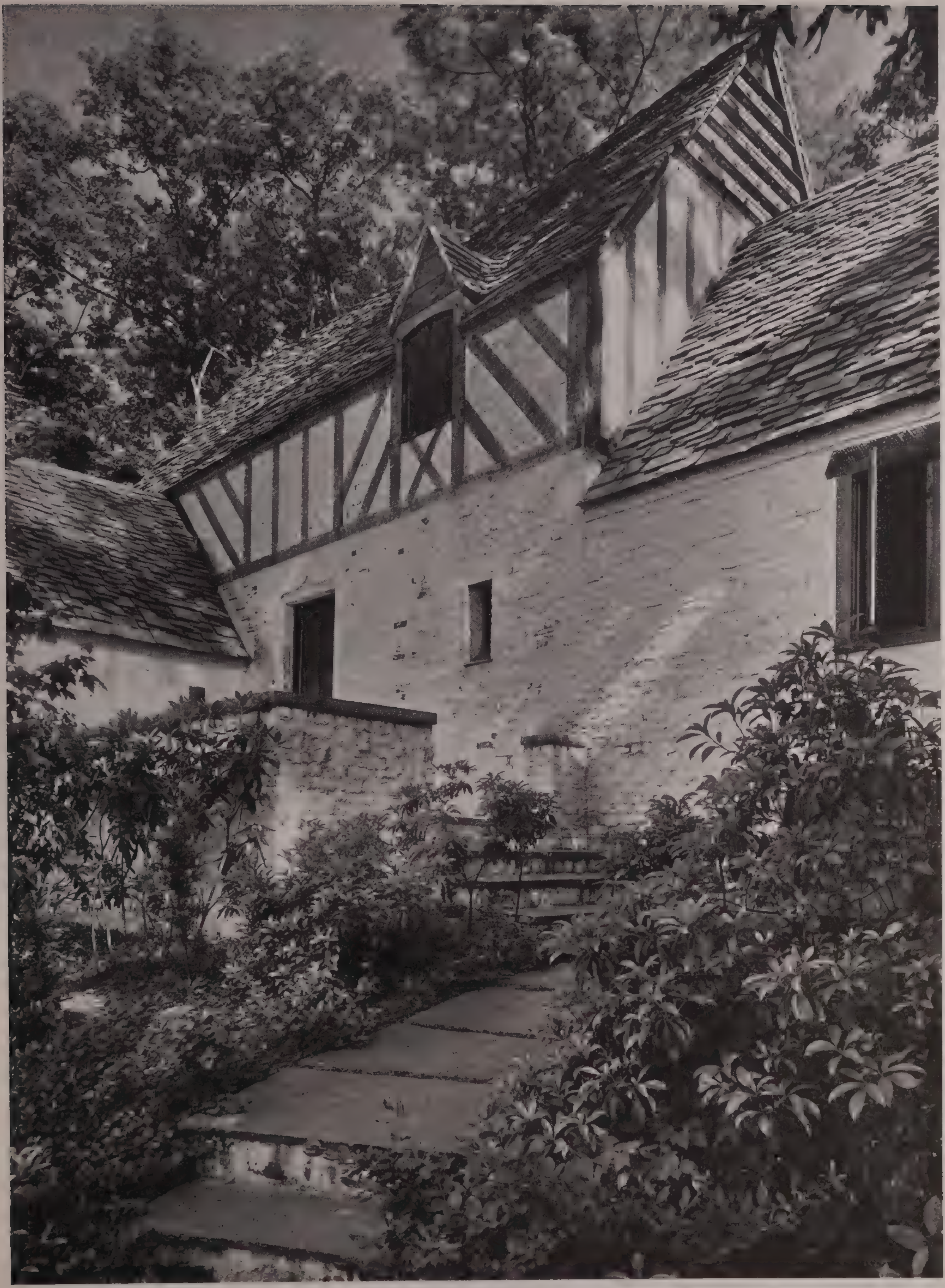
Compactness of layout, with an eye to economy of construction, was the objective. The house contains 26,000 cu. ft. including the one-car garage in the basement



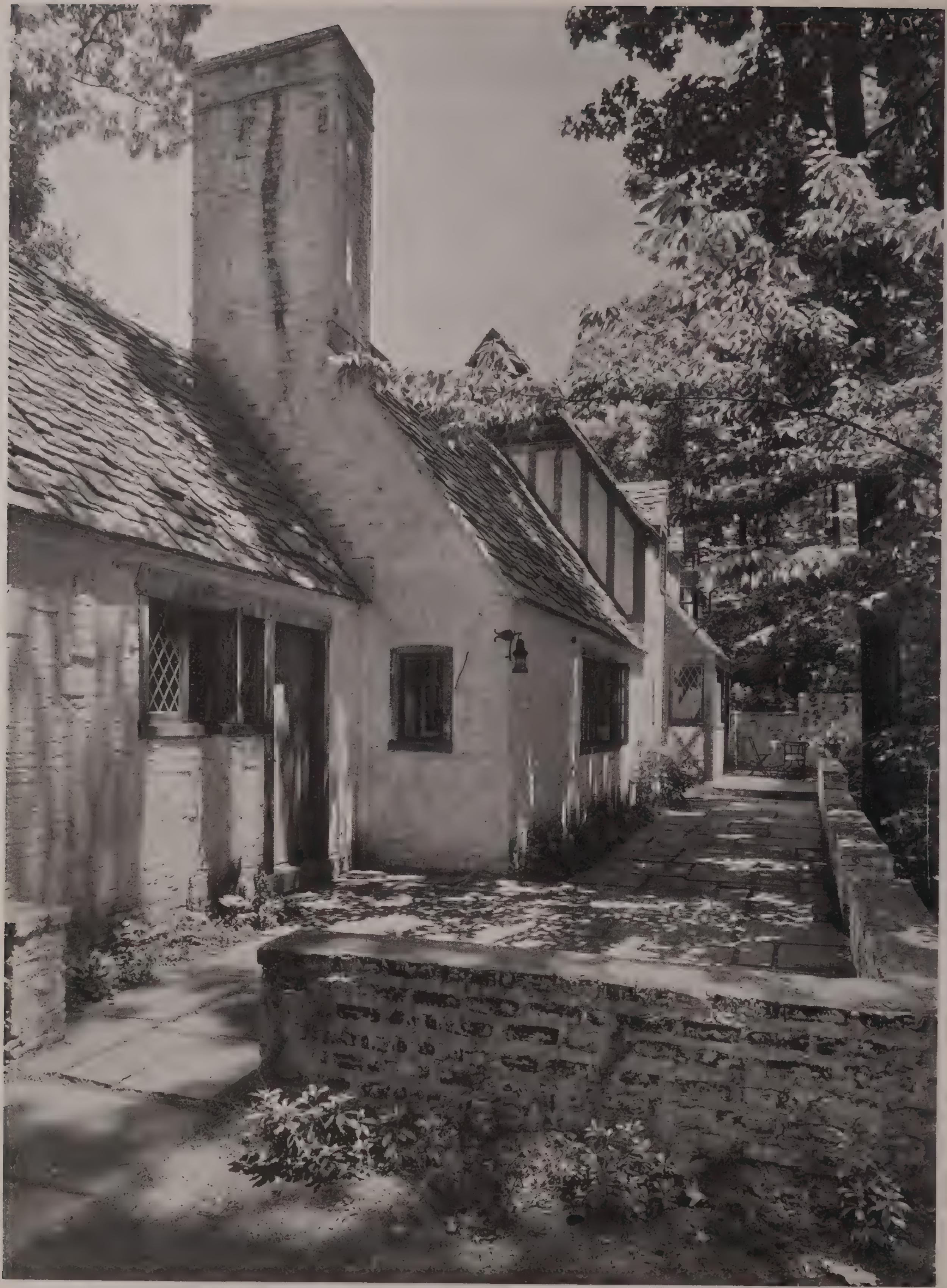
FIRST · FLOOR PLAN ·



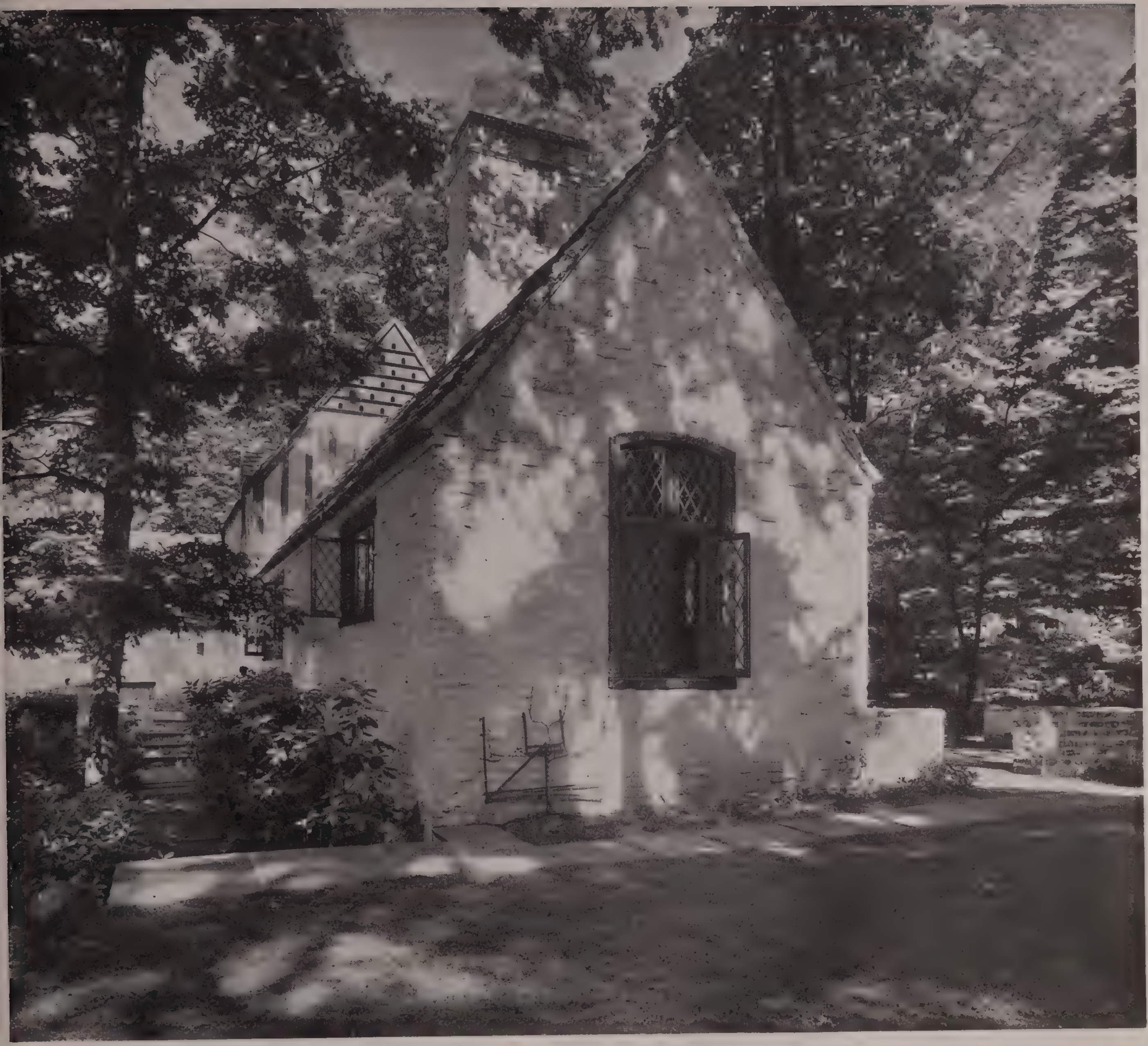
SECOND · FLOOR · PLAN ·



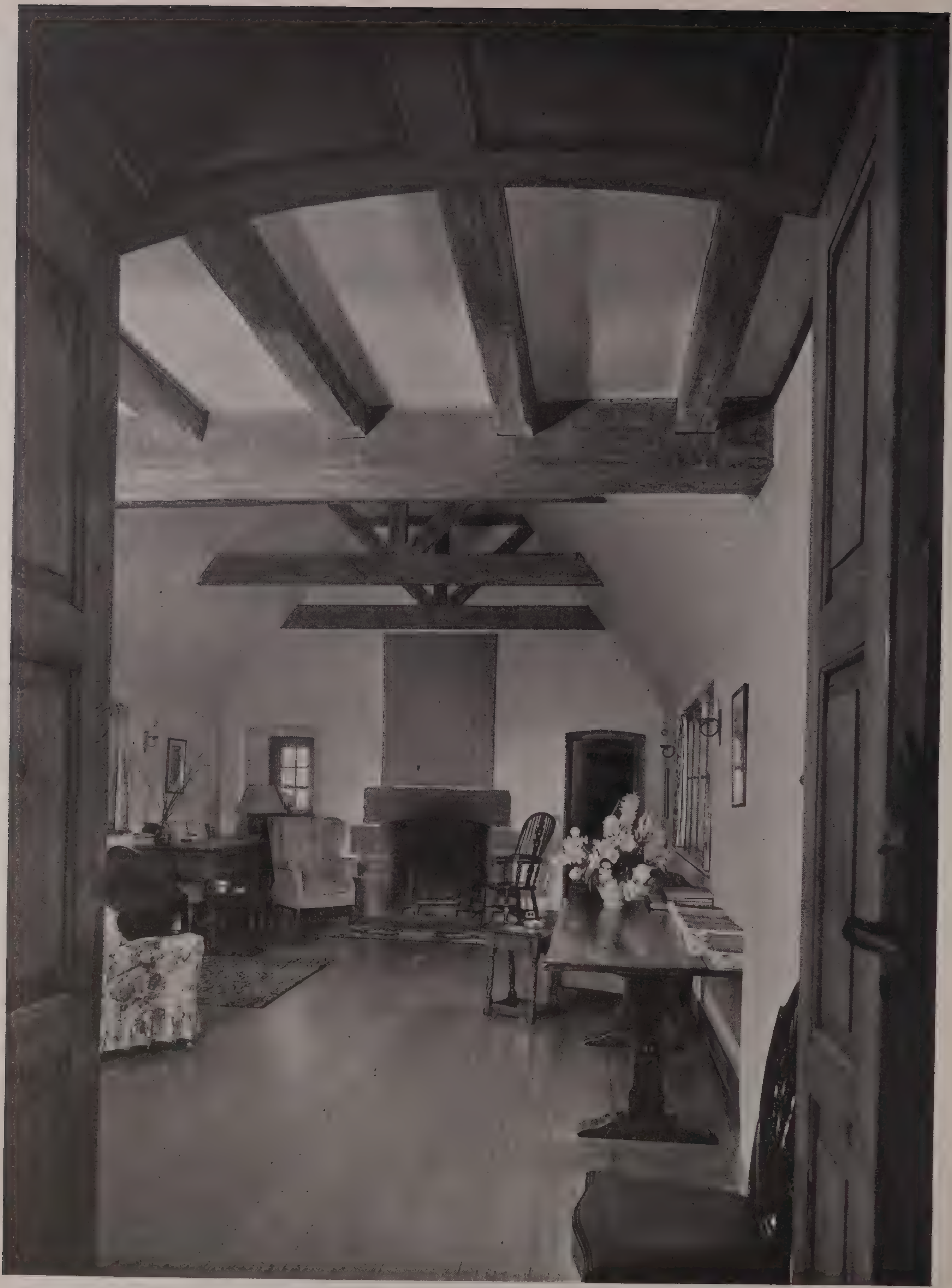
The contours of the site made possible the basement-level garage, with an easy rise to the entrance terrace adjoining it



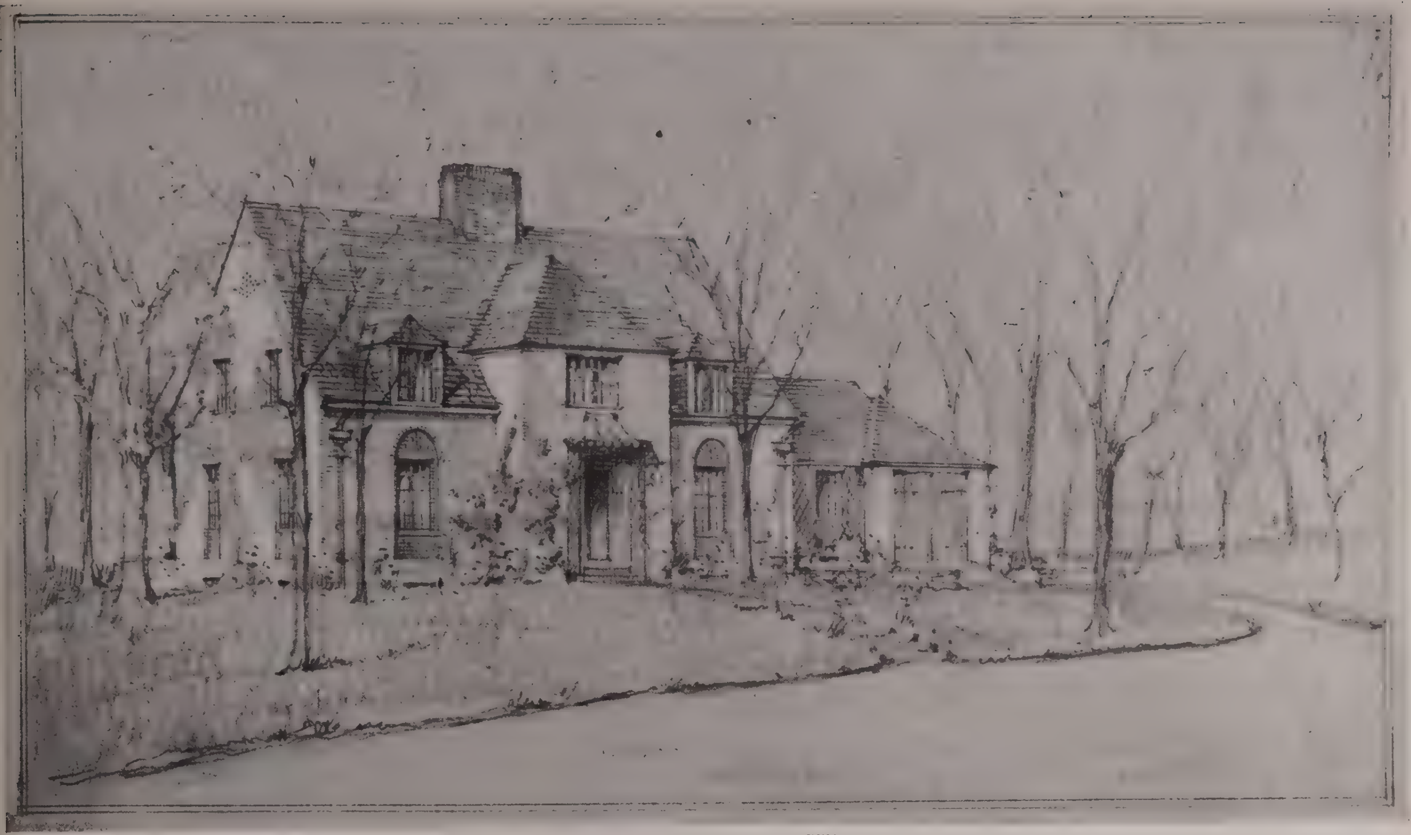
A view along the south terrace, shielded from the street by the house itself. At the far end the terrace widens for an outdoor dining space



The library gable from the west. Its long, low roof lines and low terrace walls help to create the illusion that the house is much larger than its cubical contents attest. The house received Honorable Mention and a bronze medal in the 1933 Better Homes in America Small House Architectural Competition



Both living-room and library are carried up into the roof space. Here in the living-room the roof trusses and plank floor are of oak



Photographs by John Wallace Gillies

HOUSE OF WALDRON FAULKNER

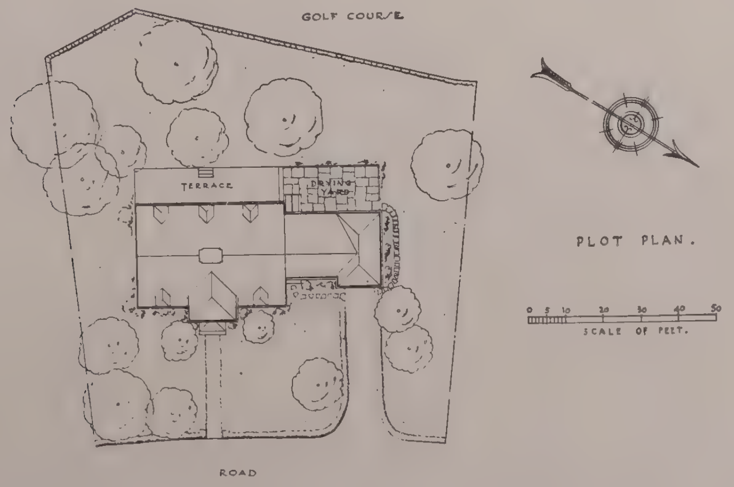
BRONXVILLE, N. Y.

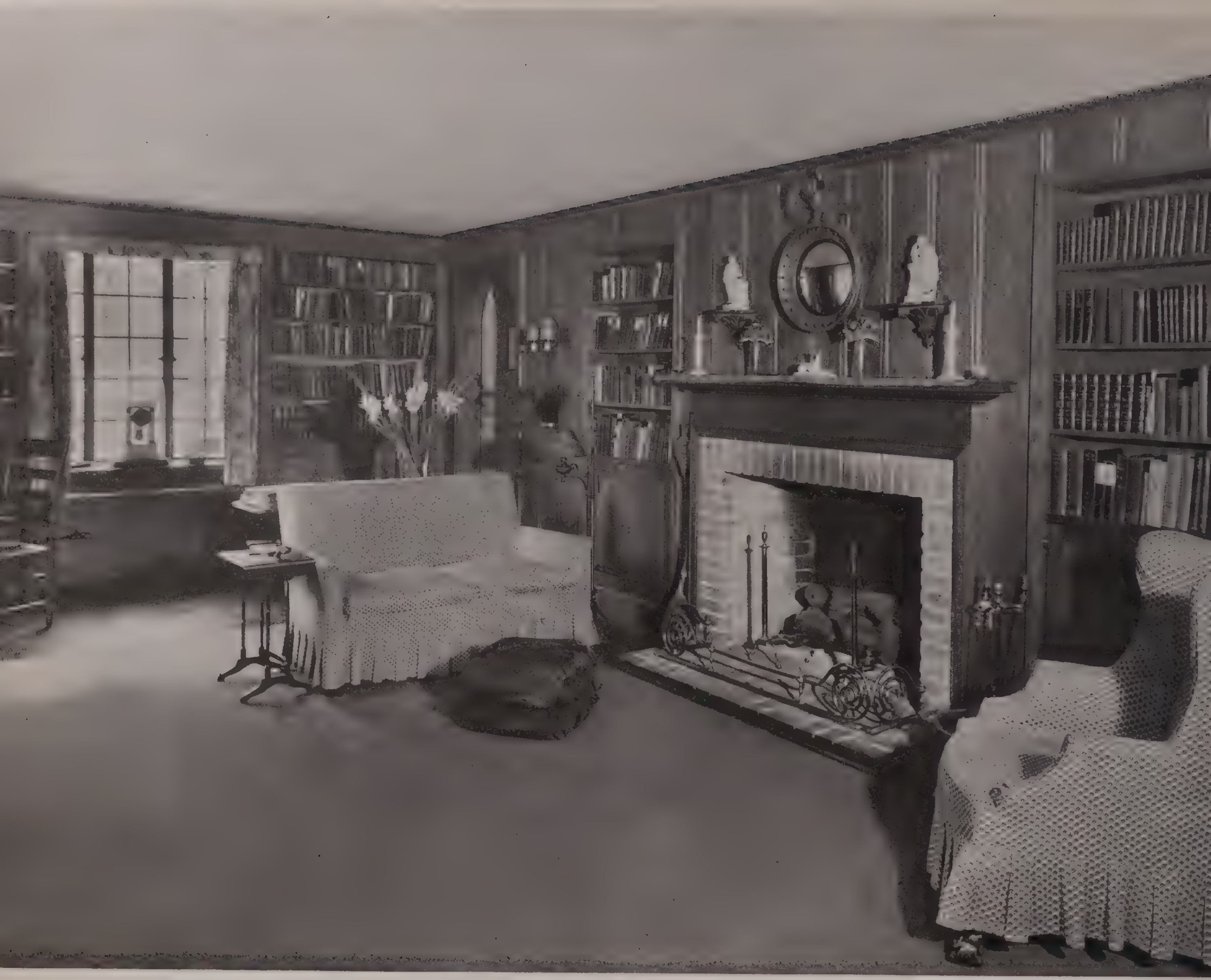
Waldron Faulkner

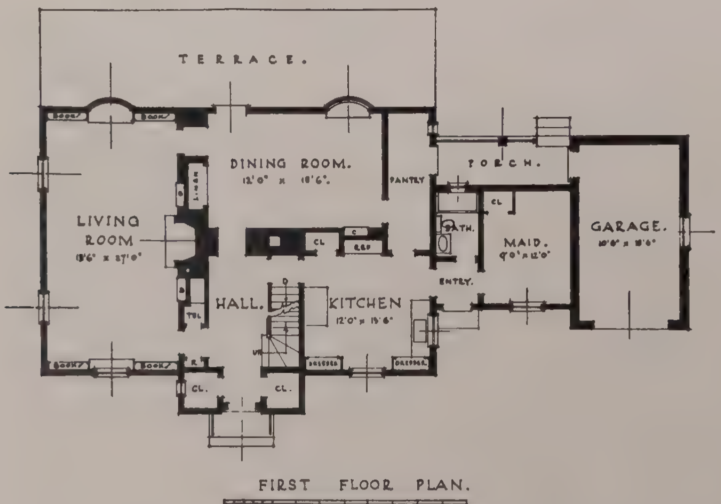
ARCHITECT

"If you should ask me why I consider this the best small house I have ever done, my answer would be that I was sure that the owner liked it."

WALDRON FAULKNER

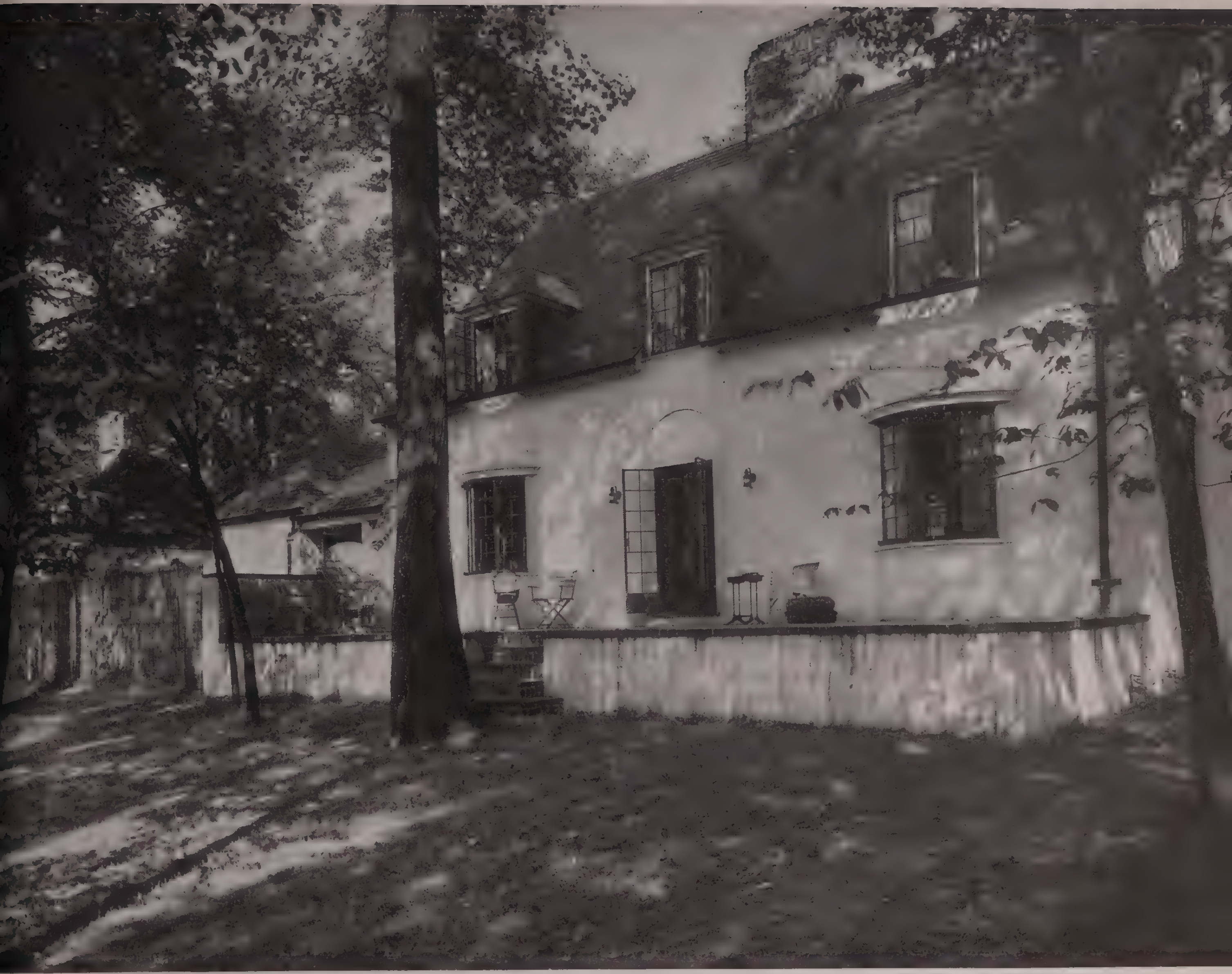




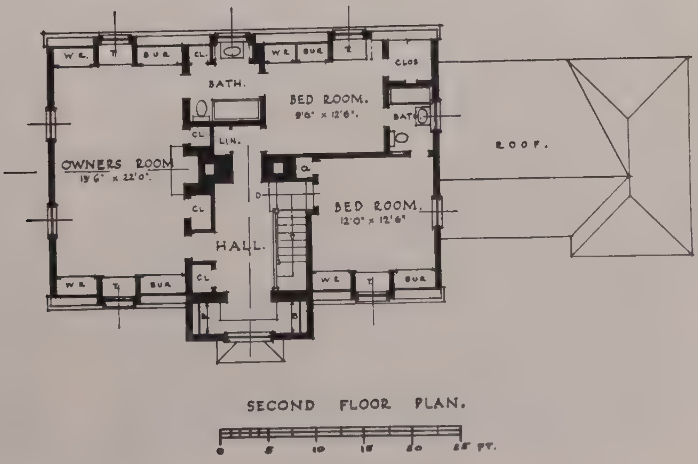


The living-room is sheathed in pine of random widths. Book-shelves have been carried across both ends of the room as well as those flanking the fireplace, and have all been given the appearance of fully recessed shelves.

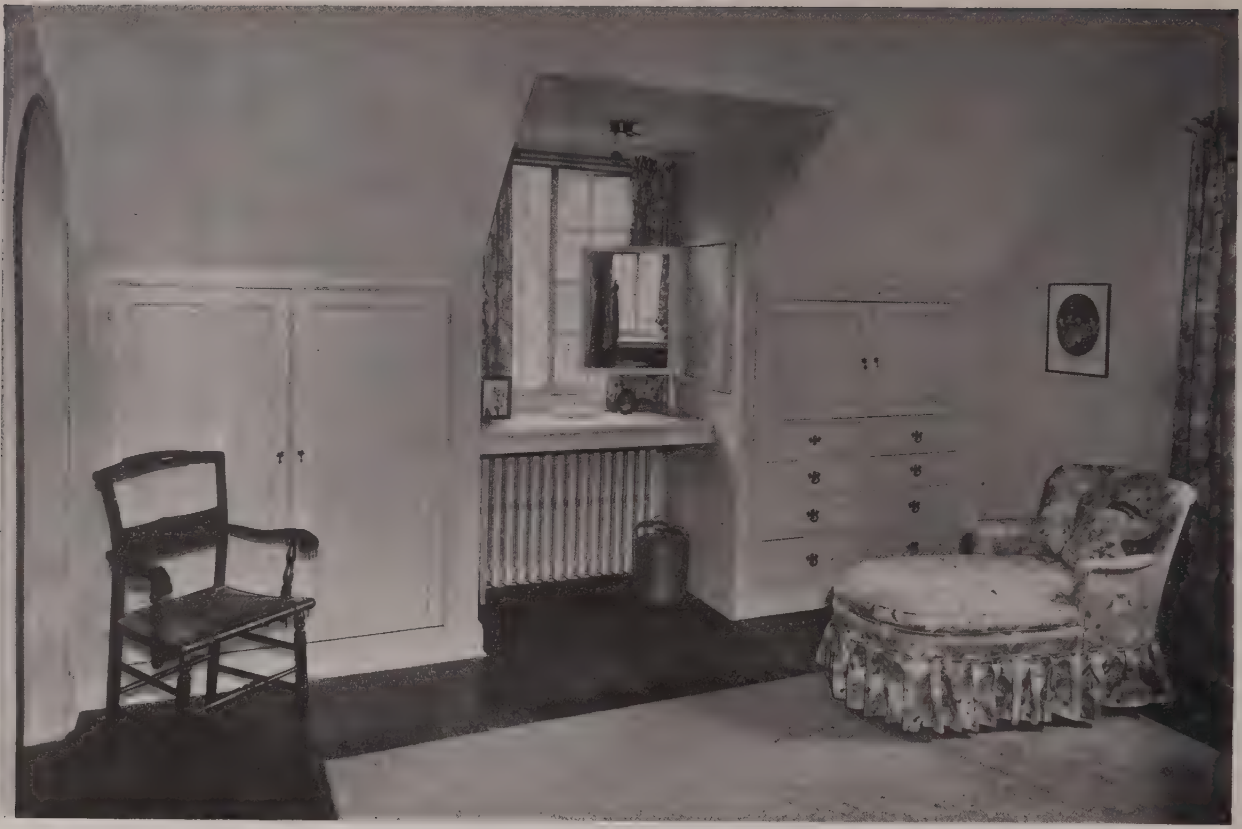
Making one chimney serve the house, even though taking flues from both sides of a central hallway, is an ingenious scheme



The house, built in 1928, won an Honorable Mention in a House Beautiful competition. It is of white stucco on frame, with blue steel windows, and black slate roof. Though but a story and a half high, none of the second-story space is lost, due to the building in of bureaus and wardrobes where the head room was low. The roof pitch was established by the needs of this expedient

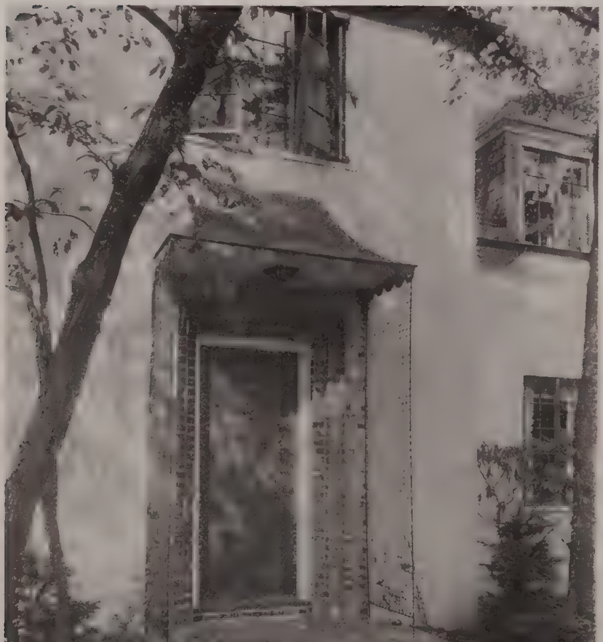


SECOND FLOOR PLAN.

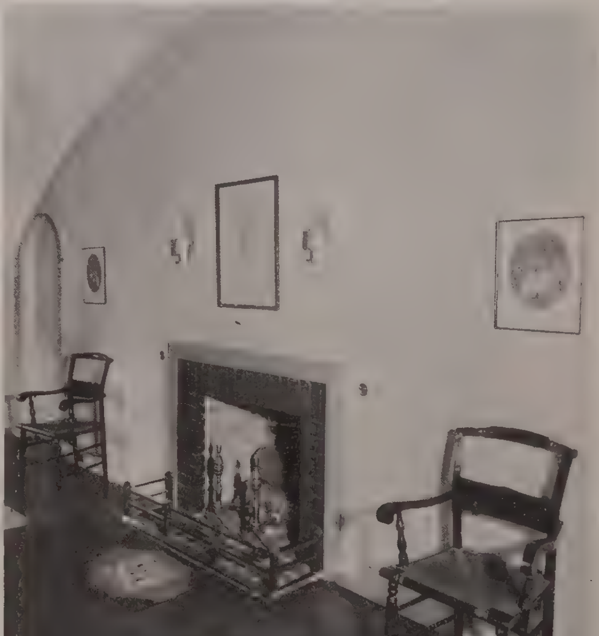


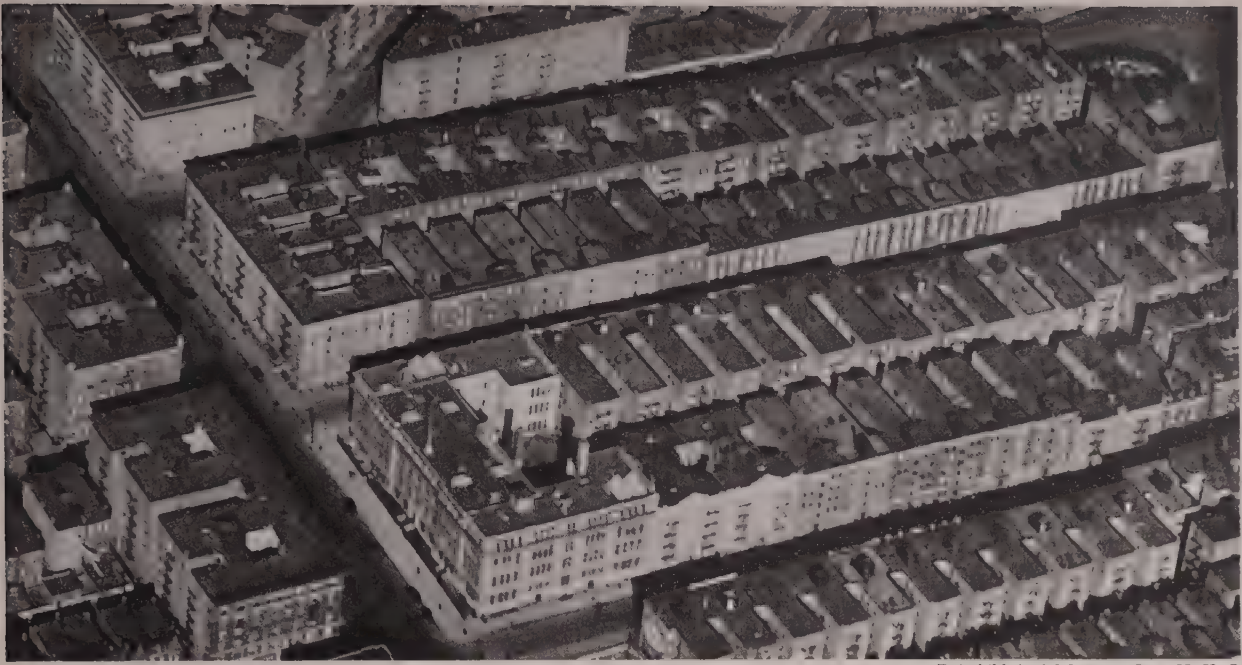
One end of the owners' room, showing the utilization of low-headroom space. A broad window sill forms a dressing-table, with hinged mirrors in the dormer reveals

Main entrance, with brick surround tied into the frame, and a copper-hood bearing a light in its soffit



Fireplace side of the owners' bedroom. The closet doors flanking the fireplace are flush and without trim





Fairchild Aerial Surveys, Inc., N. Y. C

A typical area in the Bronx, New York City, with a coverage of over seventy per cent—"aggregations of brick and mortar put together without plan and without beauty"

The Architect and His Job

By B. Charney Vladeck

MEMBER OF THE NEW YORK CITY HOUSING AUTHORITY

MINE is the distinction of having been born in a real log cabin. This wouldn't qualify me for the Presidency of the United States, for this cabin was located in a very remote corner of northwestern Russia. It lacked electricity, refrigeration, and plumbing. Water had to be hauled from a well several blocks away. The latrines were located in the yard. Kerosene lamps and candles provided light at night. For purposes of refrigeration we dug a deep pit in the out-house, which we children delighted to climb down and up on a narrow ladder. However, the cabin was very spacious, with windows facing three sides of the compass. There was also a big court, which was used mostly by the milch cow, and a huge truck garden which provided us with vegetables the whole year round.

Today I live in a rather expensive apartment in New York City, which provides every advancement made in housing within the last hundred years. It has good plumbing, direct and indirect lighting, refrigeration, central heating, elevators, and incinerators. But whenever I sit down instinctively at the window, I am moved to look for some other location. Facing me across the narrow street is a great architectural monstrosity. It may have beauty but I resent its shutting off the light; one bedroom, because of it, is half dark.

It is quite remarkable how with the advance of plumbing, heating, lighting, and refrigeration, space and light receded. There is no feeling of freedom in the modern dwelling, no sense of its being a part of yourself. With all the technological progress of our civilization, two-thirds of our population live in dwellings which contain only some of the improvements, one-third enjoy none of them, and only approximately one-third benefit from all of them. As far as their housing is concerned, great numbers of our population live in the eighteenth century, not in the twentieth century.

Most of the advances made in methods of construction affected commercial buildings only. Very little was accomplished in the field of housing. One can say, without fear of contradiction, that no important contribution has been made by architecture to housing within one hundred years. The engineers introduced sanitation, refrigeration, heating and lighting. What did the architects contribute?

I walk very often in the streets of New York, looking for some expression of its soul in the buildings around me. I walk for miles and miles and see nothing but aggregations of brick and mortar put together without plan and without beauty. Sometimes a beautiful door will wink at me, an original cornice or an outline of a lovely window. If I were put down blindfolded in the midst of the Parthenon ruins, I would immediately know where I was. The arrangement of columns and the plan would immediately suggest that this is Greece. But if you put me down blindfolded in the midst of a residential area in the United States I should never be able to tell where I was. Greek architecture was the expression of Greek civilization. Roman architecture was the expression of Roman civilization. The architect had a mission and a destiny, and while he wasn't always entirely free, he served a system first and an individual afterwards. The architect of today is nothing but a servant of interests and circumstances; if these express a civilization it is one that cripples men's lives and mutilates their souls. Land is no longer ground for an architect's vision or for a community's need. It is an opportunity for business, a symbol of speculation.

* * *

The whole Island of Manhattan was bought, according to school textbooks, for Dutch money to the value of $24. But, believe me, it was much cleaner and much more beautiful then than it is today! The most beautiful land of New York is covered with filthy, dilapidated buildings which are a menace to the health of the individual and the community, and the ground on which they stand is measured by the square foot and sold at a higher price than the most exquisite silk.

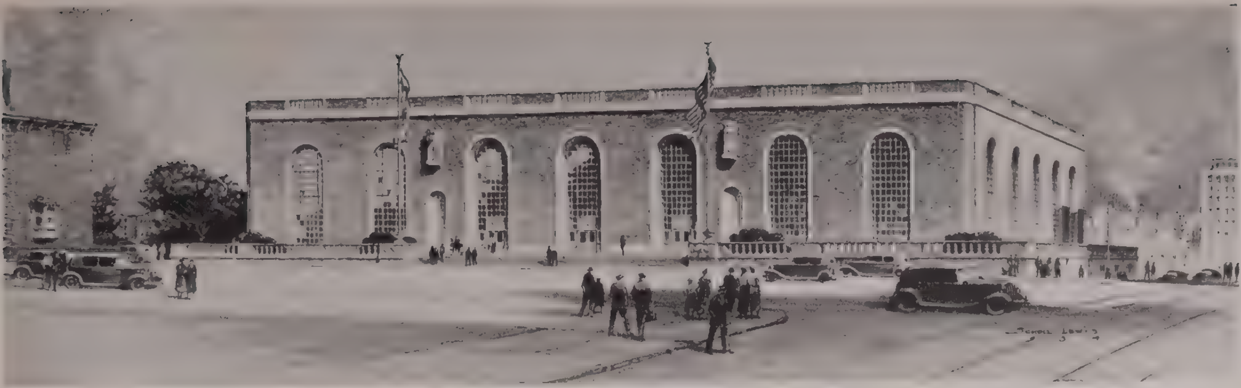
New York became rich and powerful because people from all corners of the globe came here to work and live. But the more and the harder they worked, the more uncomfortable it became for them to live in the city which they themselves built. Cost of land stole the sunshine from them, shrunk the size of their rooms, crippled their ventilation, and drove their children into the streets to become subject to criminal influences. The profit motive in building made it impossible for the architect to plan on a large scale, to plan the neighborhood, the community, and to adjust his art and his profession to the progress of living.

Architecture as I see it is a profession and an art for the purpose of organizing materials for utility and for beauty. Yet as a profession architecture has devoted itself mostly to commerce, and as an art it has prostituted itself in building temples for the golden calf. All research in construction has been carried on by private interests with only one thing in view—promotion and sales. Mr. Frederick Lee Ackerman, Technical Director of the New York City Housing Authority, cites somewhere the story of an architect who designed a housing project which contained 25 per cent less volume than previous projects, with more light, better ventilation, and larger rooms; but that project couldn't be put up because no builder could get a loan on it—building loans being based on volume only.

* * *

In the great crisis which is changing the world today, the architect has new possibilities. The world is being reorganized on a new basis, and the architectural profession must help in this reorganization, by becoming a part of the problems and needs of our social body and by assuming leadership in the continuation and readjustment of our culture.

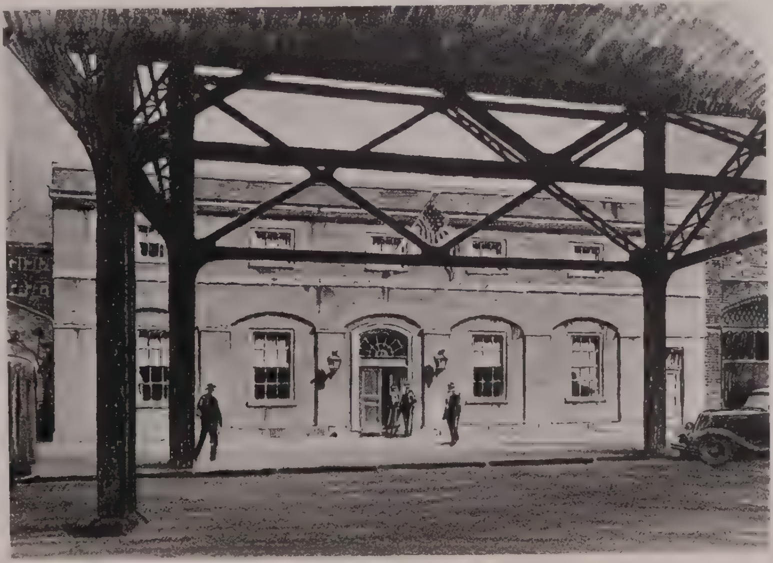
Everybody is speaking about the need of rebuilding our cities. There are innumerable boards and committees on regional and city planning. Volumes are being written about the living needs of our people, but there will be no real rebuilding of our cities before the communities for which the cities are to be rebuilt are also reorganized on a more just, more economic and more beautiful basis. For seventy, eighty years we built temples for money changers, politicians and self-satisfied industrial rulers. Fire traps, hovels and foul dwellings were the portion for the people at large. It is time for the architect to begin planning and building for the average American, for the man who has always been victimized and is now coming into his own. Housing and city planning are no longer a technical problem. They have become a very important phase of our general economic and social problem. Unless the architect understands this and is imbued with a new spirit, he will never be able to express his destiny and to become a creator rather than merely a draftsman and a juggler with figures.



Bronx Post Office, New York City. Thomas H. Ellett, designing architect. Rendering by Schell Lewis

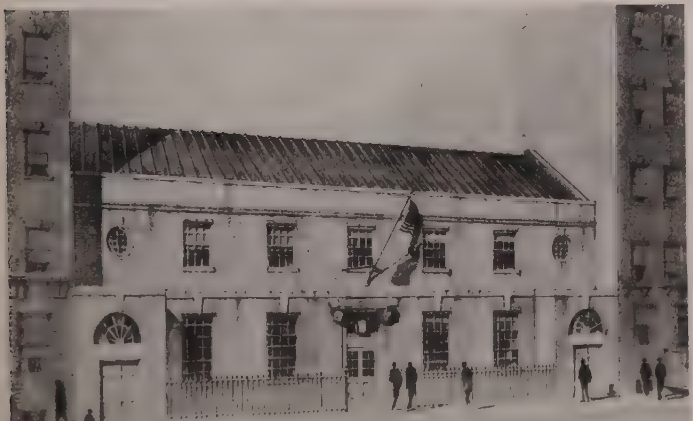
U. S. Post Offices

SOME OF THE FIRST FRUITS OF THE PLAN UNDER WHICH OUTSIDE ARCHITECTS DESIGN SPECIFIC BUILDINGS IN THE SUPERVISING ARCHITECT'S OFFICE

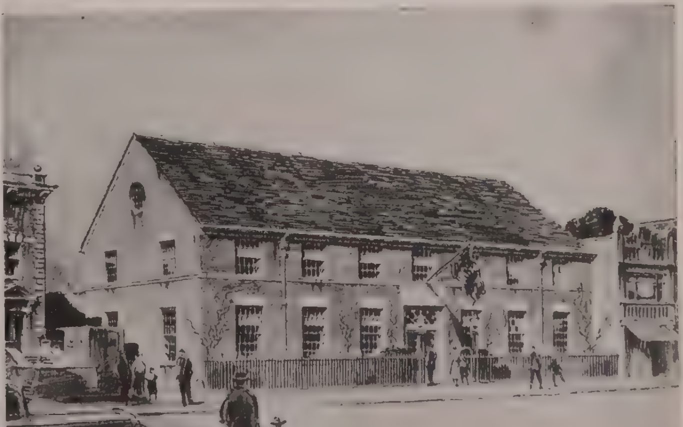


Morris Heights Station, New York City

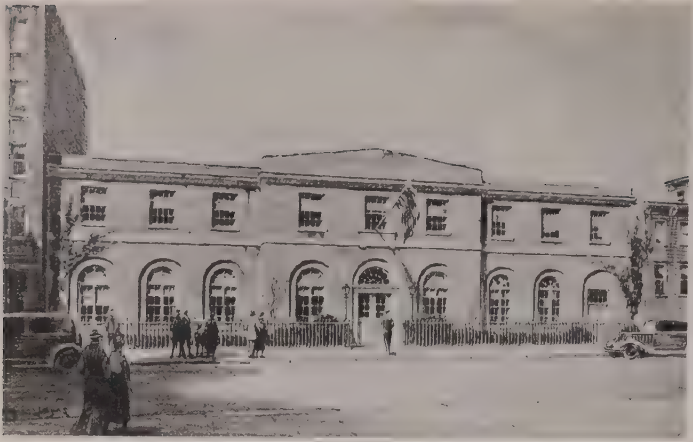
Lorimer Rich, designing architect



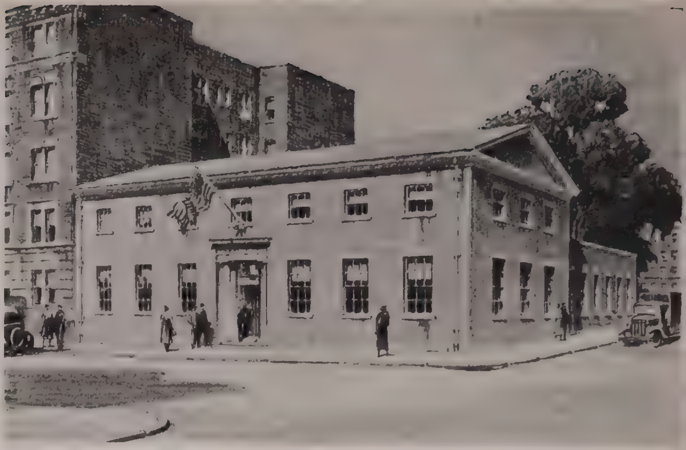
College Station, New York City. William Dewey Foster, designing architect. Rendering by Rees Weston



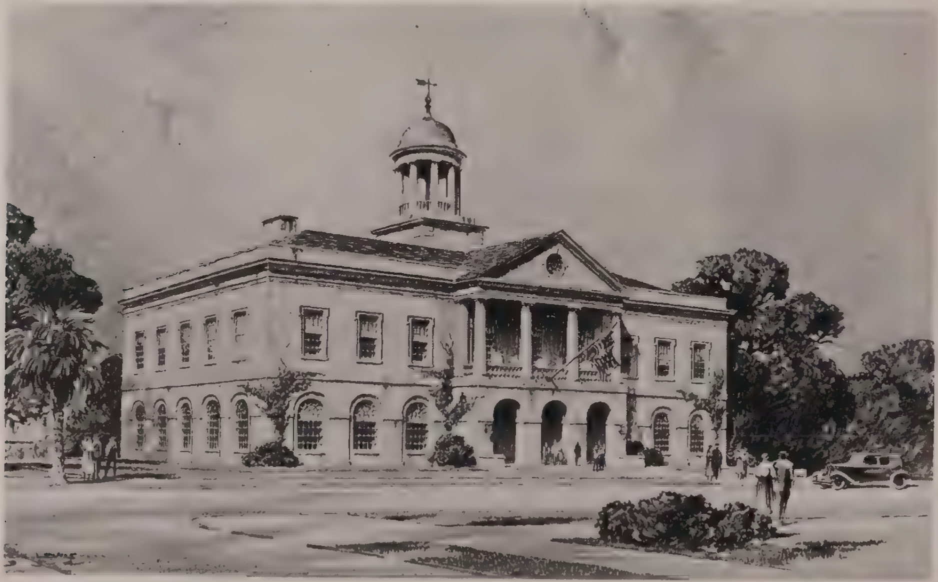
Brooklyn Post Office, Flatbush Sub-Station. Lorimer Rich, designing architect. Rendering by Schell Lewis



Brooklyn Post Office, Station A. Lorimer Rich, designing architect



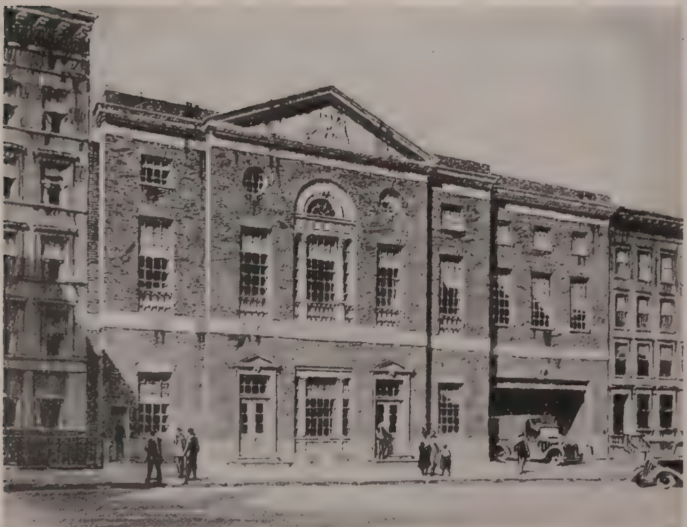
U. S. Post Office, West Farms Station. Lorimer Rich, designing architec



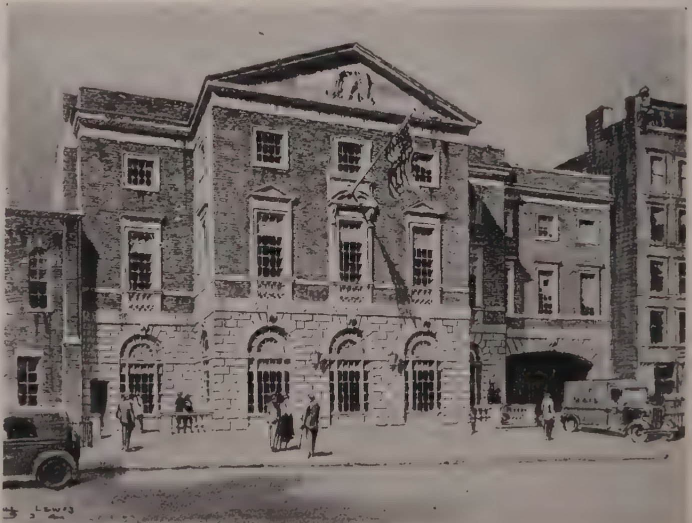
Post Office and Court House for Tallahassee, Fla. Eric Kebbon, designing architect

All renderings on this page by Schell Lewis

New York Post Office, Sub-Station W. Eric Kebbon, designing architect



New York Post Office, Sub-Station Y. Eric Kebbon, designing architect



The Editor's Diary

Friday, March 1.—Charles F. Palmer of Atlanta, Ga., enthused a large luncheon gathering of the New York Building Congress today with his talk and motion pictures of low-cost housing abroad. Mr. Palmer is one of those rare miracles, a traditional real estate man who has become fired with the need for, and desirability of, better housing for the low-income groups. I hope he will convert a lot more of his fellows in the real estate world.

Monday, March 4.—The architectural profession in New York City was plentifully represented in the large number of men who journeyed today to Flushing to the funeral of Roger Harrington Bullard. It was particularly saddening to think of Bullard's creative energies having been cut off at a time when he had just reached the top of his powers. American architecture would surely have been the richer for Roger Bullard's life if it could have been prolonged, though the debt to him is already a large one. A man of rare taste, a designer of sure touch, and a personality of unusual charm, Roger Bullard has left a place that cannot be filled.

* * *

Wednesday, March 6.—The breaking up of the proposed relief appropriation of $4,800,000,000 into eight general classifications of projects must be disappointing to the building industry. Housing is down for $450,000,000, which prompts the thought that one cannot prime the pump with an eye dropper. Possibly there is some more building hidden away in "public projects of state and local governments"—an allotment of $900,000,000. We can only hope so.

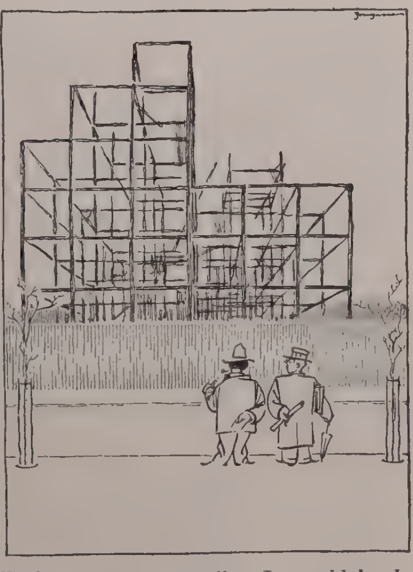
Thursday, March 7.—Eugene Steinhof is apparently working miracles in teaching art over at the Beaux-Arts Institute of Design. I spent a couple of hours with him today looking over work of students and marvelling at the progress which each one makes in the first month of his instruction. Steinhof seems to regard it as a fact to be anticipated without surprise that in a month the student has such a grasp of the human figure that he can draw it in any prescribed position without a model.

Saturday, March 9.—There are those who view with alarm the effect of the depression upon the architectural profession, believing that its members are slowly but surely fading away into other activities. A recent census made in the city of Hartford, Conn., revealed the fact that while there were twenty registered architects in the city four years ago, there are now fifty. This, of course, does not represent any real influx of architects, merely that associates and draftsmen are now practising independently.

Monday, March 11.—The A. I. A. follows a rather broad assumption in believing that any man who is nominated for office is well-known over the whole range of chapters and members. Other widely spread organizations of the kind have a custom of printing in their official organs a brief biographical sketch of the men who are nominated for important offices. It would seem to be a wise practice for the A. I. A., so that in voting for a president or a regional director the members might be voting for something more than a name and a face.

Tuesday, March 12.—There was an exciting hour tonight at the closing of the G. E. Home Electric Competition. Through the rainy and windy night came taxicabs, messengers, express wagons, all delivering unwieldy boards, 30 by 40 inches, containing as each fondly thought the one ideal solution of the problem. Each newcomer elbowed his way through an interested and excited crowd of fellow competitors to deliver his drawing. The receiving officer stripped the wrappings from it, held it up for a brief glimpse of the crowd so that they might cheer it on its way, and then loaded it onto a truck in its proper classification. Two thousand and forty drawings were received—possibly a high-water mark in competition entries.

From *Punch*



"Of course, personally, I wouldn't do anything more to it."

Thursday, March 14.—A round table group at The Architectural League today attempted to decide on the general course of architecture and the nation itself. Hugh Ferriss, Ely Kahn, Leo Solon, Benjamin Betts, George VanAnda—all venturing more or less convincing ideas of what is to be the attitude of the public toward the architect, and vice versa, and the architecture itself of tomorrow. I doubt very much whether we proved anything.

* * *

Saturday, March 16.—I went to another one of those housing luncheons today—the National Public Housing Conference, under Mrs. Simkhovitch's chairmanship. Mr. Pettit of F. H. A. told us of the progress in the Housing Division. David Swope told of the progress of pre-fabrication. Robert L. Davidson reported progress in the development of better housing technique. William Lescaze said that only in the modern style can group housing of low cost be built. We heard also from experts in home economics, from mothers' clubs, and from a few worried laymen. All of which served to while away a luncheon hour, but contributed little stimulus to actual construction.

Monday, March 18.—Dwight L. Hoopingarner brought out a rather startling fact in one of his public addresses recently which, if I am not mistaken, was this: In the Williamsburg project recently undertaken by PWA, and still in the land-acquisition stage, 66⅔ per cent of each dollar paid was for buildings which, of course, are to be destroyed. It is a severe indictment of our lack of planning in the past. It does not seem possible that we can go on indefinitely with a *laissez-faire* attitude toward building our cities.

Frank E. Lawrence, Director of the Civic Bureau in St. Louis, sees the public awakening to the necessity for replanning our cities. He points out that through lack of interest a twenty-million-dollar bond issue for civic improvements was defeated not long ago, whereas three years later the same people voted a bond issue of eighty-seven million dollars for the same purpose.

Wednesday, March 20.—Francis P. Sullivan of Washington has been appointed chairman of the Institute's Committee on Public Works. His immediate problem is the proper relationship between the profession and the government. Here is hoping that he and his advisors will soon be able to go to the government with a constructive and altruistic plan by which the profession can aid in rebuilding America.

Thursday, March 21.—A small but enthusiastic group gathered at luncheon today at The Architectural League to speed the parting officers and welcome the incoming ones. Arthur Loomis Harmon retires as president after two years of efficient leadership in difficult days. Archibald M. Brown takes the reins.

* * *

Saturday, March 23.—The General Electric Company officers were hosts tonight at a dinner at the Hotel Ambassador, the primary purpose of which was the announcement of the Home Electric Competition awards. The jury seems to have had a very difficult time in premiating fifty-two entries, as might well be expected. When hung, the drawings made a line a mile long. There was, as might have been anticipated, a wide difference in the number of contestants entering the various classes. Class A, the small house for the North, proved to be by far the most popular problem, for there were a thousand entries in this class. The same size house for the South drew three hundred. The larger size house for the South was a class which attracted the smallest number of competitors—only two hundred. It was said that fully 75 per cent of the drawings submitted can be classed as Modern—a fact which, I think, cannot be charged against the competitors' own choice since the program practically dictated this through suggestion, and also through the fact that one could achieve a satisfactory solution within the cubage limitations only by avoiding any waste space under the roof.

The jury consisted of seven architects, an expert in child training, a domestic science expert, an engineer and contractor, and a real-estate man. The architects on the jury were: Ralph T. Walker of New York, chairman; Franklin O. Adams of Tampa, Ernest A. Grunsfeld, Jr., of Chicago, Charles T. Ingham of Pittsburgh, H. Roy Kelley of Los Angeles, Professor Charles W. Killam of Harvard, and Eliel Saarinen of Bloomfield Hills, Mich. The chairman of the jury, in announcing the awards, spoke of the winning designs as the expression of youth making known its demands for the houses in which it wants to live. He admitted that many of us will not like the looks of these houses, but that they represent what is coming. Mr. Hugh Potter, the real-estate member, seemed less sure of this fact than that he himself had little confidence that these houses could at present be sold to the public.

Monday, March 25.—Out of the facts and figures resulting from the real property inventory, in which an investigation of two and a half million homes was made, covering sixty-five cities and representing every state, comes a picture. It is a composite dwelling representing the conditions prevailing in American urban homes of today. It is nineteen years old, a single-family unit, of wood construction. It has either gas or electricity for illumination and cooking, and it has a stove for heating. The house is in evident need of repair and improvement. Its present value is between three and five thousand dollars.

What is the architectural profession doing toward replacing this house with one that costs no more, but which embodies at least some of our ideas of better living?

* * *

Wednesday, March 27.—One of the elder statesmen in the profession tells me that he feels that there might be a real hope for the future of the profession if we were able to agree upon and state definitely what constitutes an adequate architectural service. This gentleman's impression, after many years of service, is that there are far too many members—be it whispered—making a semblance of practising architecture, but rendering services that are inadequate, inept, and sometimes worse. Here at least is a suggestion for discussion in the chapter meetings of the A. I. A.

Thursday, March 28.—The first six months' effort under Title I of the National Housing Act resulted in an impressive total of minor alterations and repairs. Little of it could have passed through the architects' offices, for 70 per cent of those who borrowed spent less than $400. A recent survey in a representative American city showed that a thousand homes could use 7000 items of improvement, the owners themselves expressing a desire for 1400 separate items. Among the major items of the 7000 group, 494 were plaster repairs; 132, roof repairs; 972, lack of insulation; 672, additional rooms needed in attic or basement; 549, lack of mechanical refrigeration; 365, garage needed; 361, floor repairs; and 561, exterior painting. Of course a similar survey among farm properties would have shown different needs—for water supply, plumbing and heating among others.

A glimpse into Rutherford Boyd's garden at Leonia, N. J.

* * *

Friday, March 29.—John J. Wade of the Buffalo Chapter thinks there is both an opportunity for and an obligation on the part of the profession to adopt some sort of clinical practice that will serve the "man in overalls."

"In one section of the clinic there would be a small fee, let us say $5, for an office visit, or $10 for a field visit Any architect registered at the clinic headquarters would act as doctor in diagnosing the ailments of the sick house and writing a prescription to remedy the difficulties. Such a small fee would not include the 'operation,' and if drawings were necessary a nominal additional fee would be charged.

"New homes would be designed in another department of the clinic, no house costing over $7,000. For preparing complete plans and specifications for $3,500, $5,000, or $7,000 houses, there would be a flat rate of, for example, $50, $75, or $100.

"The work of the clinic could be tied with Titles I and II of the National Housing Act, furthering the architect's service to the individual home owner. The public would be invited to use the clinic only when there is no personal preference for a particular architect."

Mr. Wade apparently leaves to some of the rest of us the problem of just how to prepare complete plans and specifications for a $3,500 house for a fee of fifty dollars.

Saturday, March 30.—I see that Dr. C. F. Hirshfeld is telling the engineer that it is high time that he came out of his technological shell and began to take an interest in the real world around him. There seems to be a growing realization among the professions that a man is not merely a chemist, or an engineer, or an architect, but also a social unit.

Sunday, March 31.—With unprecedented sums of money likely to become available at any moment for housing, thirty-eight of the states are still without laws which would bring into being public housing authorities. And without public housing authorities there is no evident likelihood of the spending of public money for housing in these states.

NUMBER 103 IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS
ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

ARCHITECTURE'S PORTFOLIO OF

ENTRANCE SEATS

Subjects of previous portfolios are listed below at left and right of page

1926
DORMER WINDOWS
SHUTTERS AND BLINDS

1927
ENGLISH PANELLING
GEORGIAN STAIRWAYS
STONE MASONRY TEXTURES
ENGLISH CHIMNEYS
FANLIGHTS AND OVERDOORS
TEXTURES OF BRICKWORK
IRON RAILINGS
DOOR HARDWARE
PALLADIAN MOTIVES
GABLE ENDS
COLONIAL TOP-RAILINGS
CIRCULAR AND OVAL WINDOWS

1928
BUILT-IN BOOKCASES
CHIMNEY TOPS
DOOR HOODS
BAY WINDOWS
CUPOLAS
GARDEN GATES
STAIR ENDS
BALCONIES
GARDEN WALLS
ARCADES
PLASTER CEILINGS
CORNICES OF WOOD

1929
DOORWAY LIGHTING
ENGLISH FIREPLACES
GATE-POST TOPS
GARDEN STEPS
RAIN LEADER HEADS
GARDEN POOLS
QUOINS
INTERIOR PAVING
BELT COURSES
KEYSTONES
AIDS TO FENESTRATION
BALUSTRADES

1930
SPANDRELS
CHANCEL FURNITURE
BUSINESS BUILDING ENTRANCES
GARDEN SHELTERS
ELEVATOR DOORS
ENTRANCE PORCHES
PATIOS
TREILLAGE
FLAGPOLE HOLDERS
CASEMENT WINDOWS
FENCES OF WOOD
GOTHIC DOORWAYS

Below are the subjects of forthcoming Portfolios

Overdoors, Interior
JUNE

Brick Cornices
JULY

Signs
AUGUST

Chimney Offsets
SEPTEMBER

Window Heads
(EXTERIOR, ARCHED)
OCTOBER

Unusual Brickwork
NOVEMBER

Photographs showing interesting examples under any of these headings will be welcomed by the Editor, though it should be noted that these respective issues are made up about six weeks in advance of publication date.

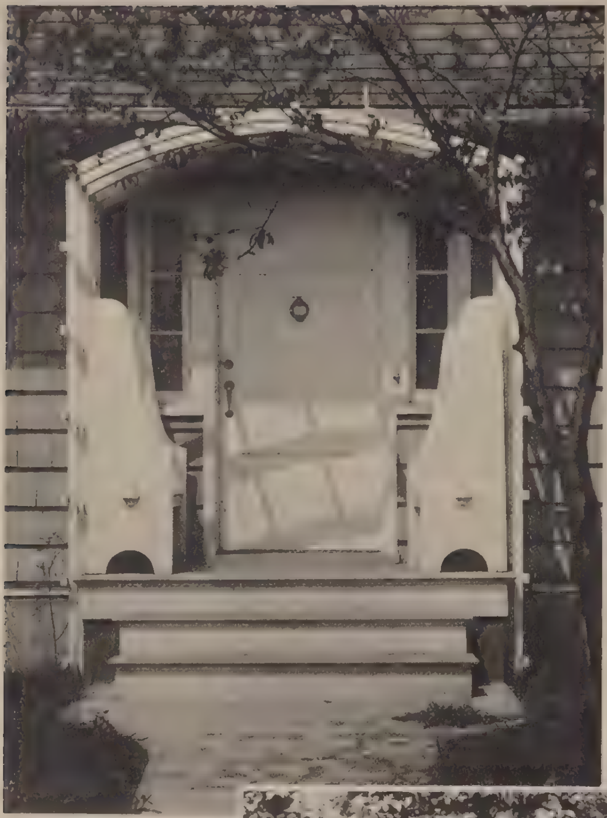
1931
BANKING-ROOM CHECK DESKS
SECOND-STORY PORCHES
TOWER CLOCKS
ALTARS
GARAGE DOORS
MAIL-CHUTE BOXES
WEATHER-VANES
BANK ENTRANCES
URNS
WINDOW GRILLES
CHINA CUPBOARDS
PARAPETS

1932
RADIATOR ENCLOSURES
INTERIOR CLOCKS
OUTSIDE STAIRWAYS
LEADED GLASS MEDALLIONS
EXTERIOR DOORS OF WOOD
METAL FENCES
HANGING SIGNS
WOOD CEILINGS
MARQUISES
WALL SHEATHING
FRENCH STONEWORK
OVER-MANTEL TREATMENTS

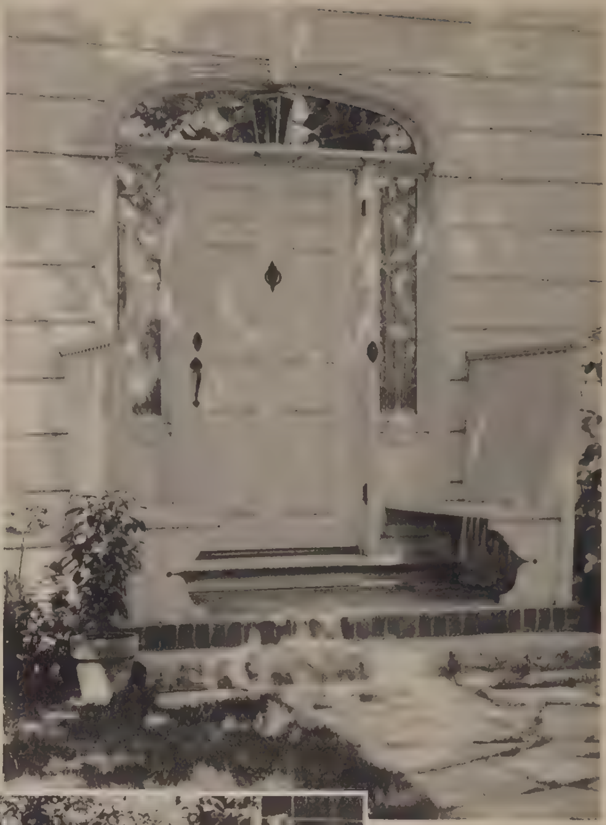
1933
BANK SCREENS
INTERIOR DOORS
METAL STAIR RAILINGS
VERANDAS
THE EAGLE IN SCULPTURE
EAVES RETURNS ON MASONRY GABLES
EXTERIOR LETTERING
ENTRANCE DRIVEWAYS
CORBELS
PEW ENDS
GOTHIC NICHES
CURTAIN TREATMENT AT WINDOWS

1934
EXTERIOR PLASTERWORK
CHURCH DOORS
FOUNTAINS
MODERN ORNAMENT
RUSTICATION
ORGAN CASES
GARDEN FURNITURE
WINDOW HEADS, EXTERIOR
SPIRES
BUSINESS BUILDING LOBBIES
ROOF TRUSSES
MODERN LIGHTING FIXTURES

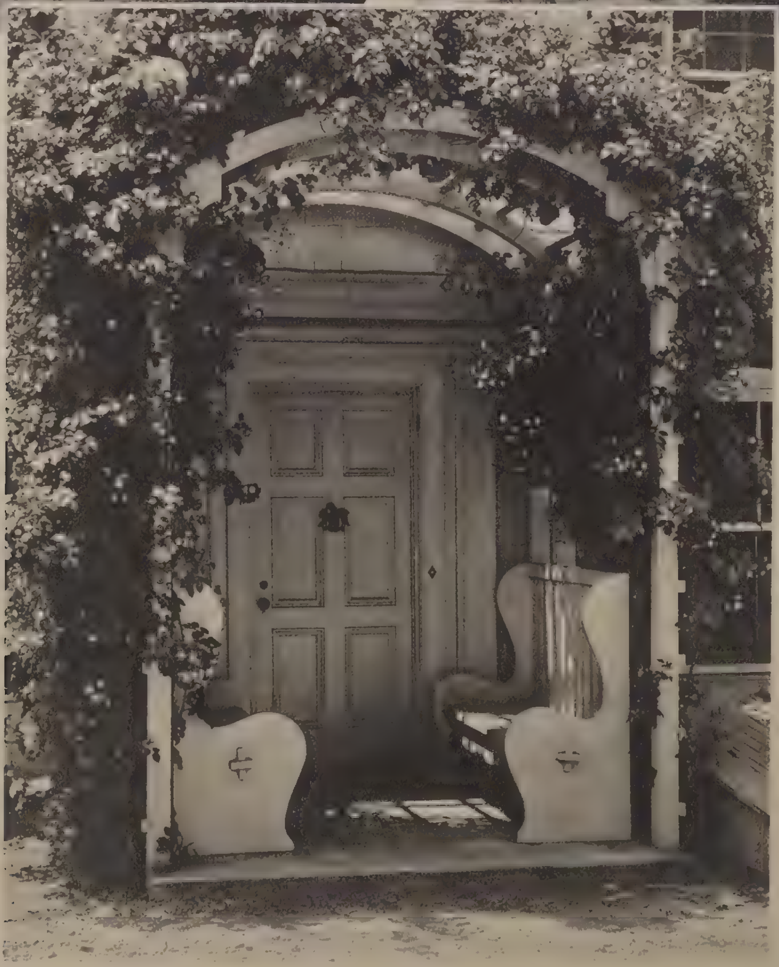
1935
CIRCULAR WINDOWS, GOTHIC AND ROMANESQUE
TILE ROOFS
MOLDED BRICK
DORMER WINDOWS



Hasbrouck
Heights, N. J.
W. H. Butterfield

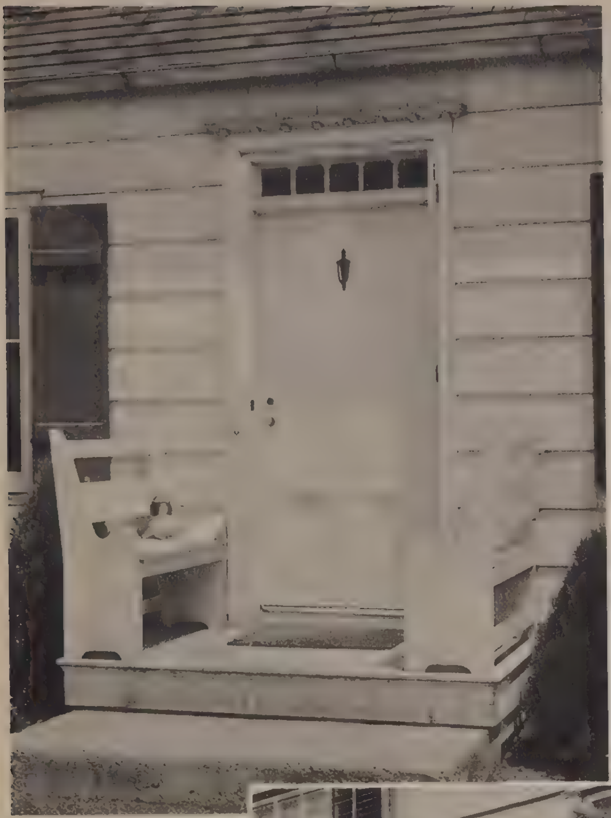


Glencoe, Ill.
R. C. Hunter

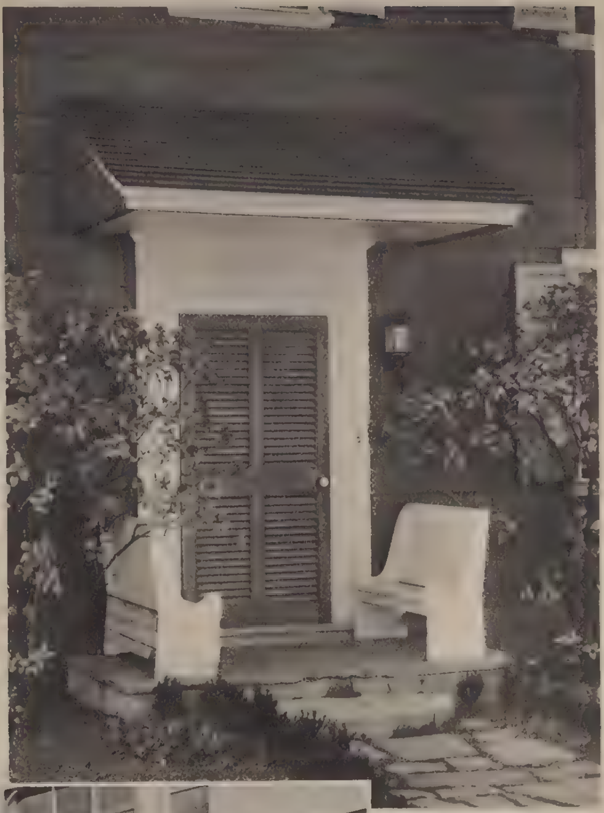


Red Bank, N. J.

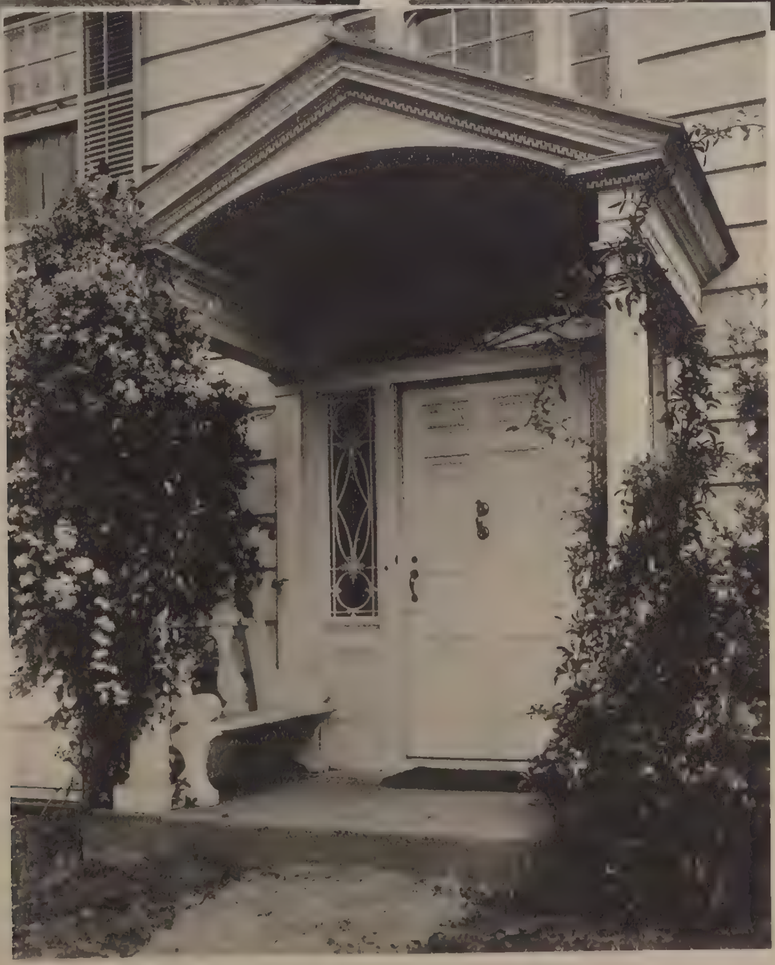
Office of
John Russell Pope



Darien, Conn.
Charles S. Keefe

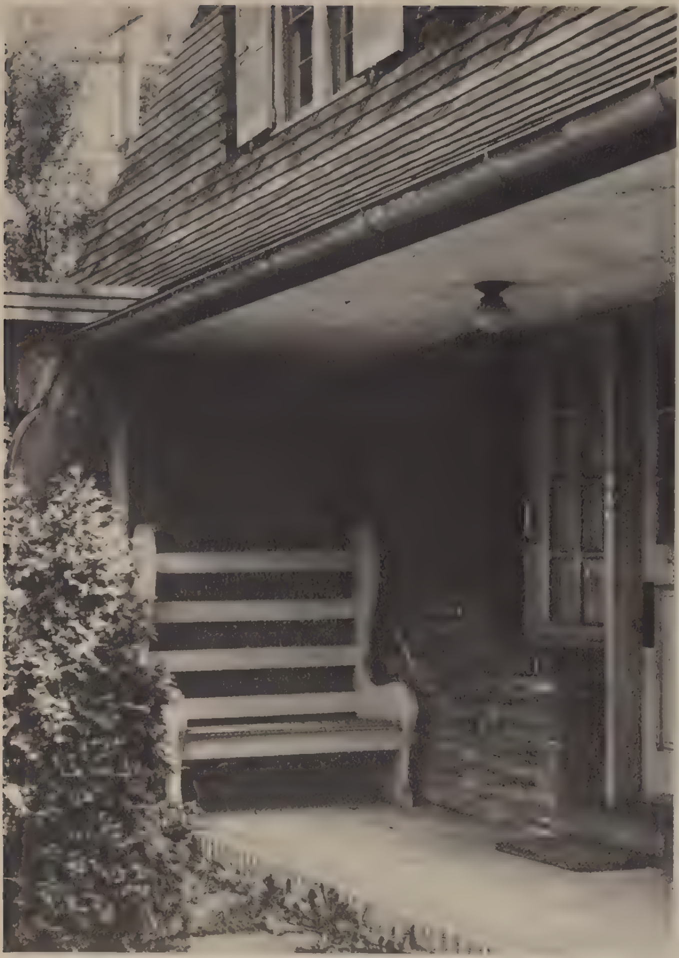


Manhasset, N. Y.
Roger H. Bullard



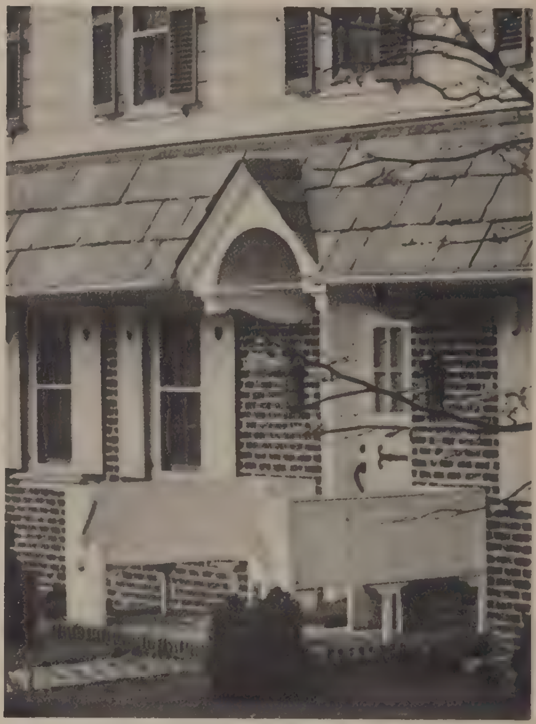
New Canaan, Conn.

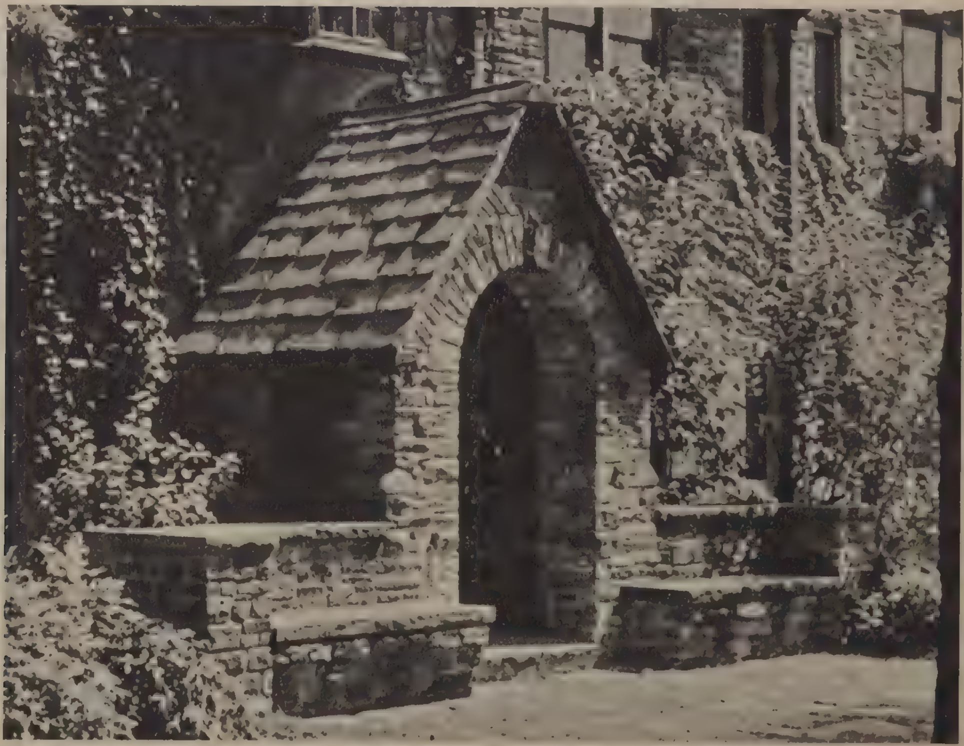
Electus D. Litchfield



Near Philadelphia, Pa.
Wilson Eyre &
McIlvaine

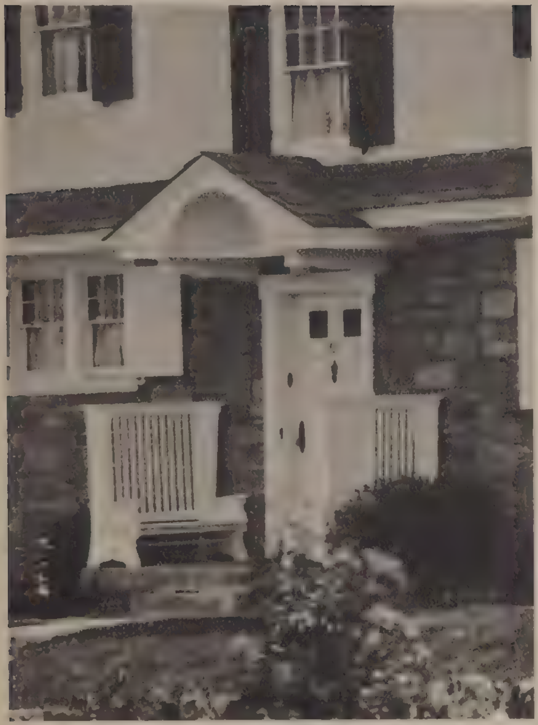
Englewood, N. J.
Caretto & Forster



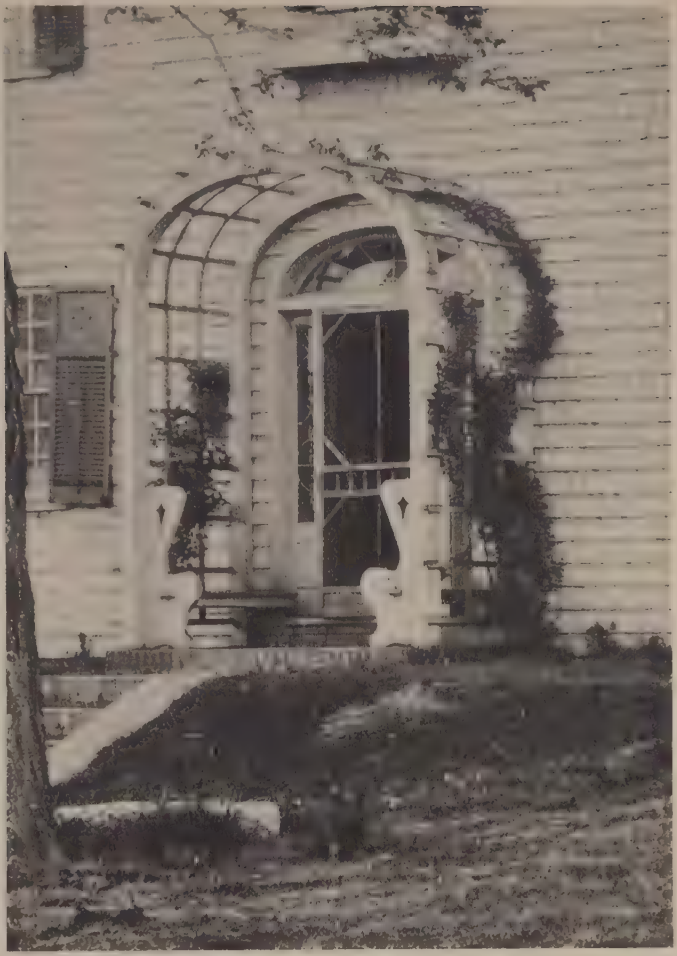


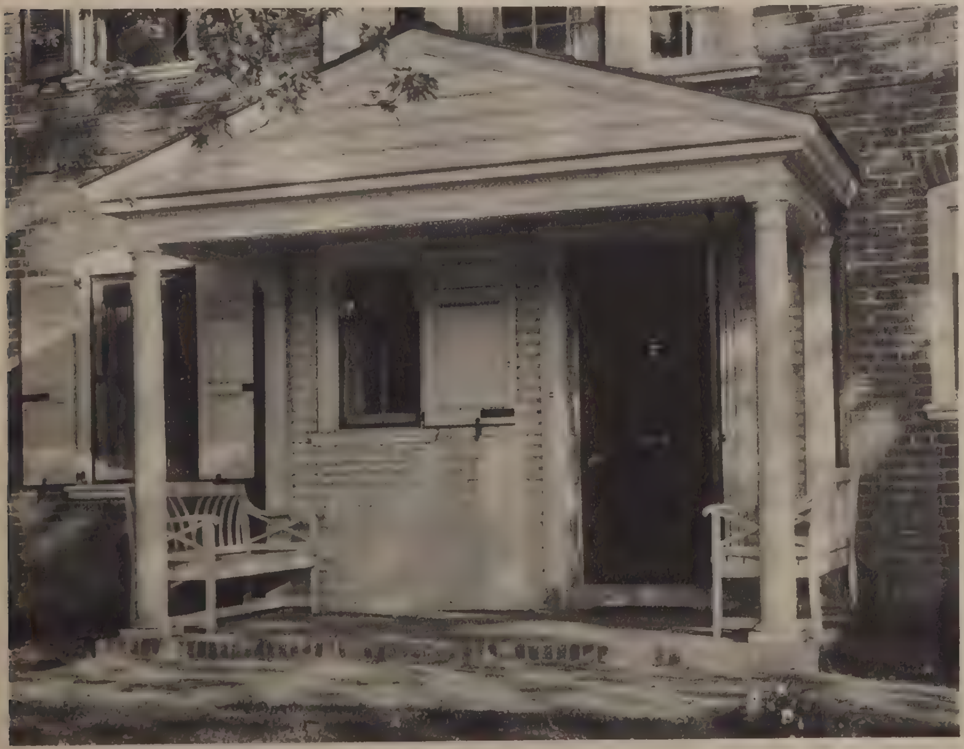
Maplewood, N. J.
Office of
John Russell Pope

Springfield, Pa.
Addison H. Savery

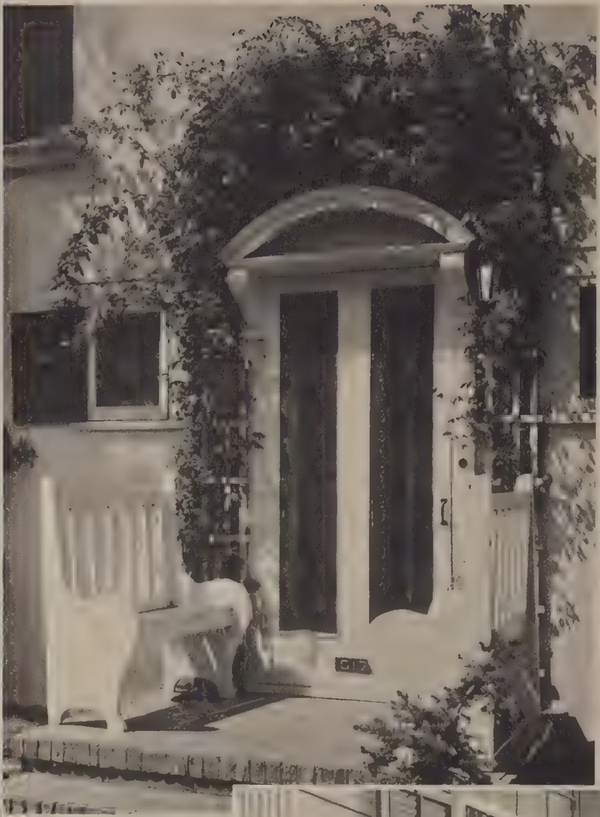


Kingsport, Tenn.
Clinton Mackenzie

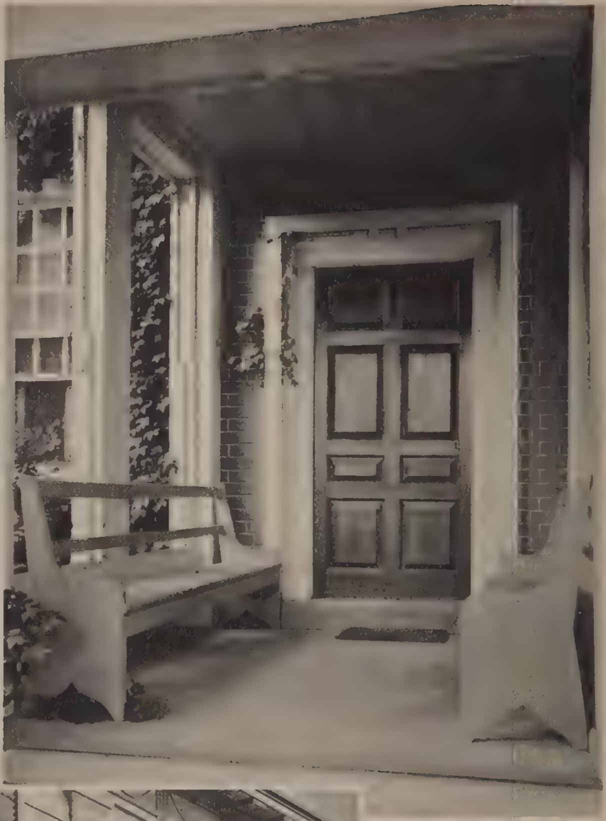




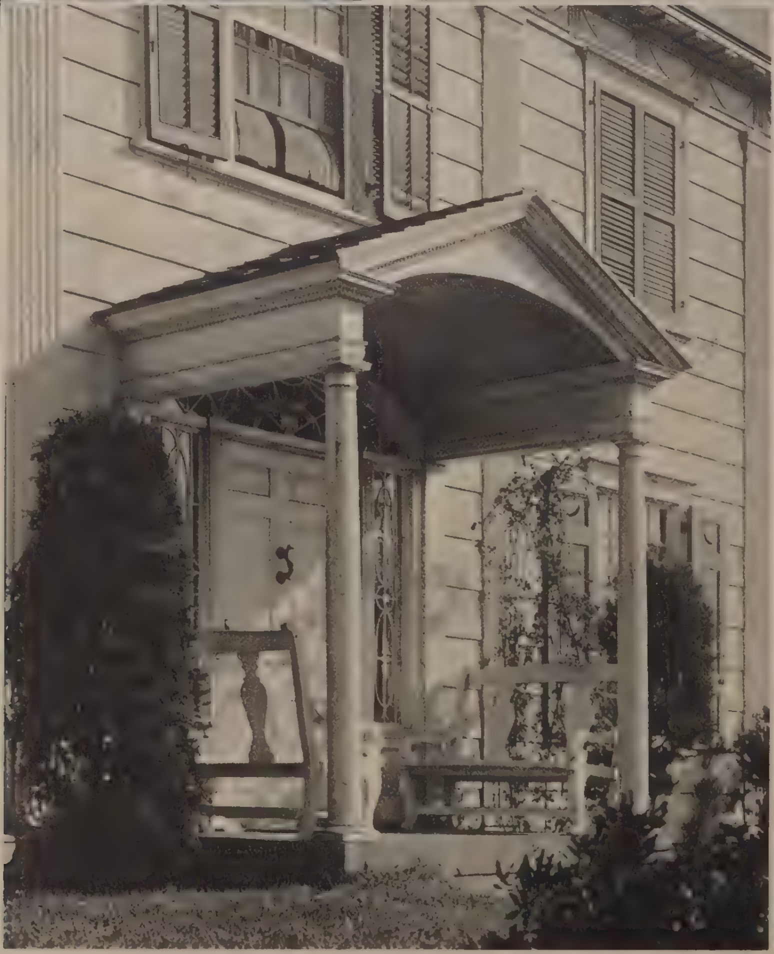
Chestnut Hill, Pa.
John Graham, Jr.



Beverly Hills, Calif.

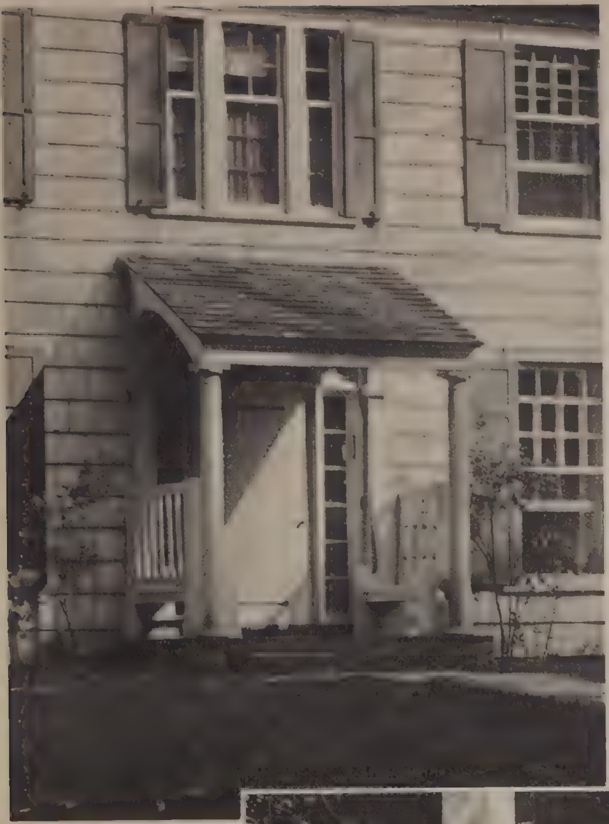


Ratcliffe Manor Easton, Md.

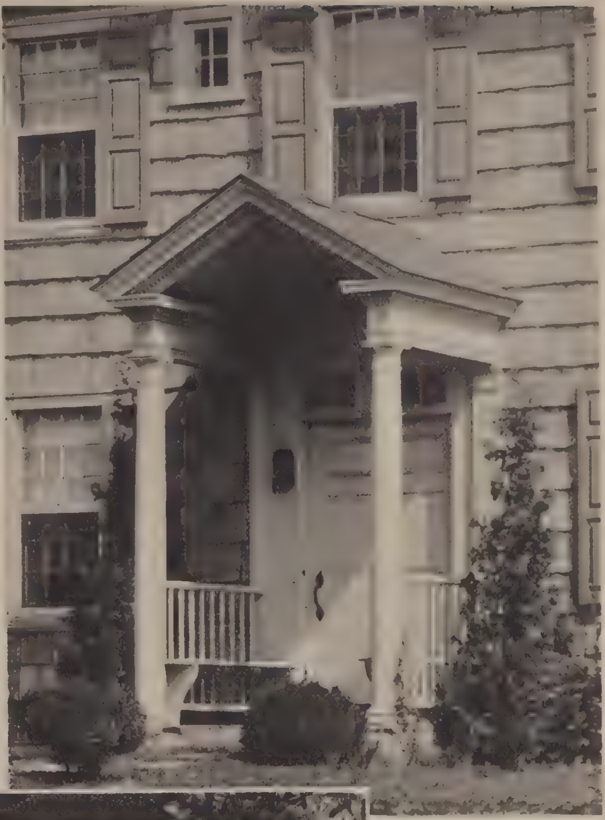


Oyster Bay, N. Y.

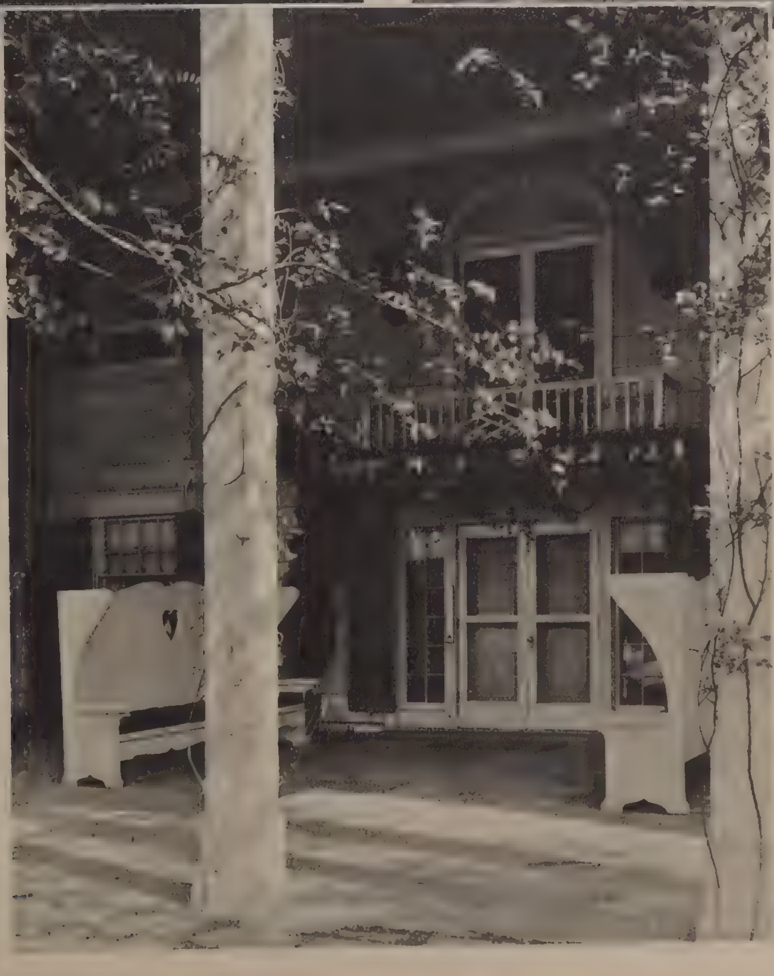
Electus D. Litchfield



Lake George, N. Y.
Edward S. Hewitt

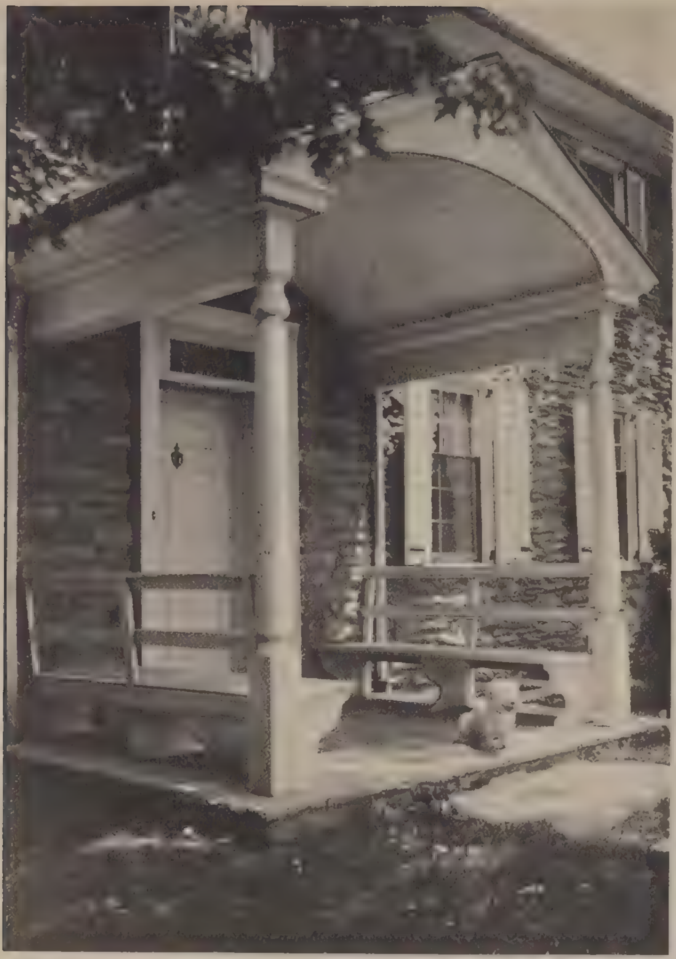


Portchester, N. Y.
Nelson Breed



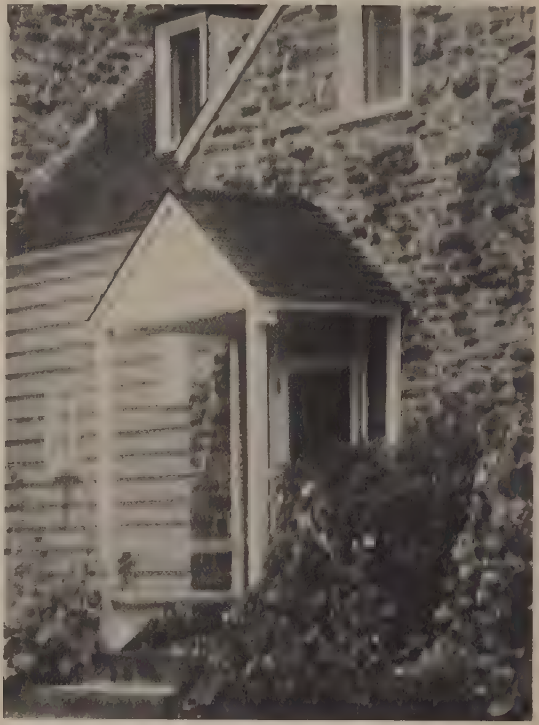
Wickatunk, N. J.

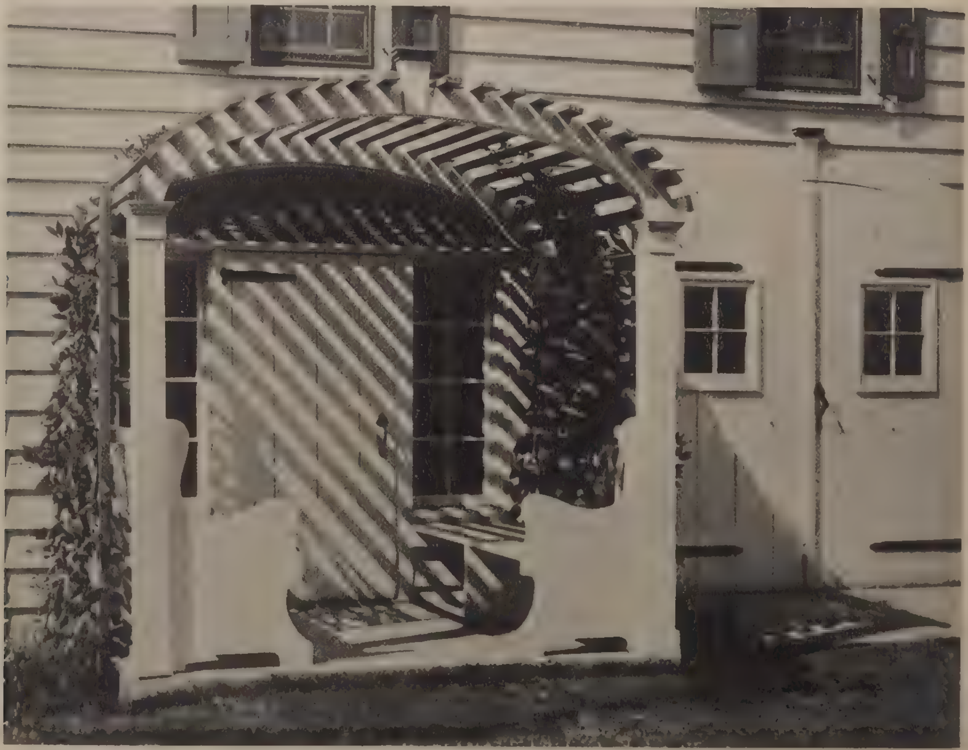
Office of
John Russell Pope



Ardmore, Pa.
Folsom, Stanton &
Graham

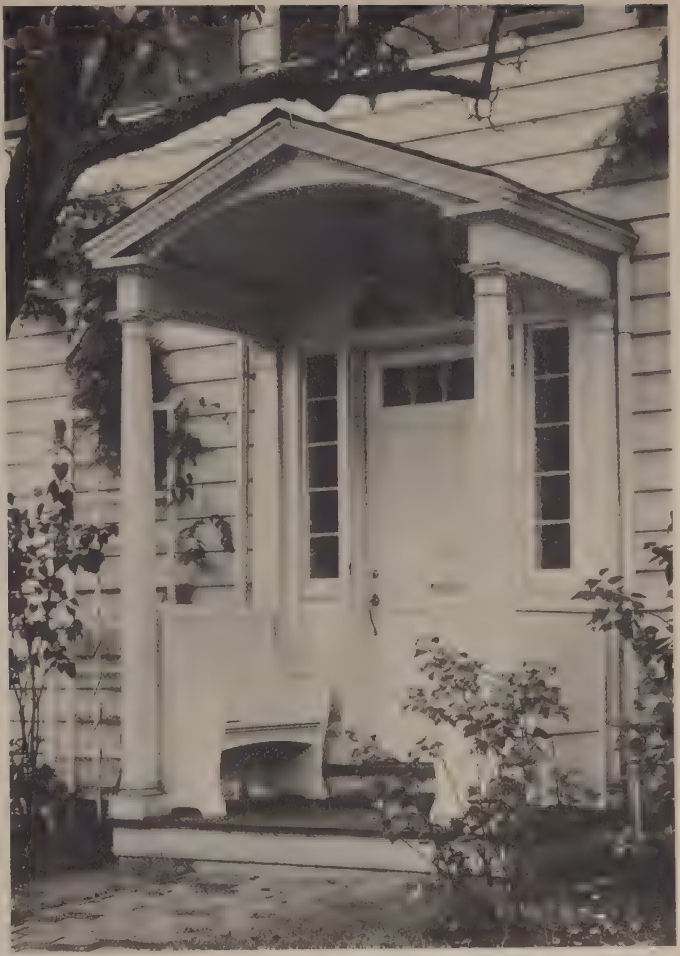
Montrose, Pa.
Lewis E. Welsh



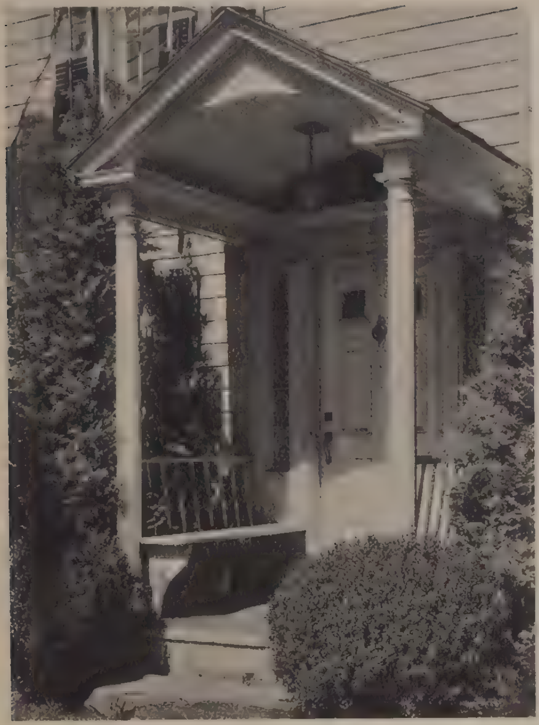


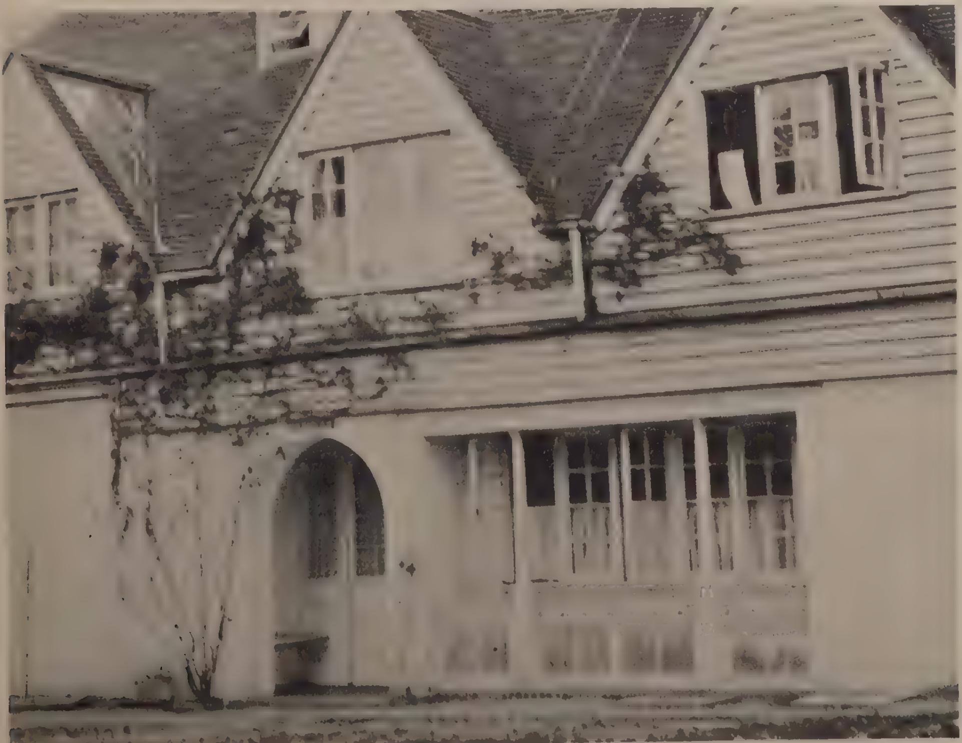
Entrance to quarters
over a garage

Cambridge, Mass.
Chapman & Frazer

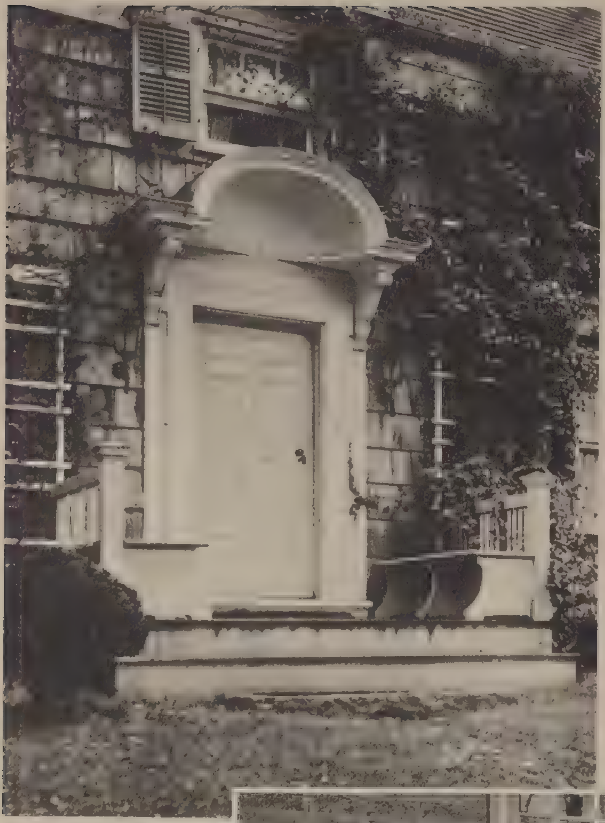


Hartsdale, N. Y.
Dwight James Baum

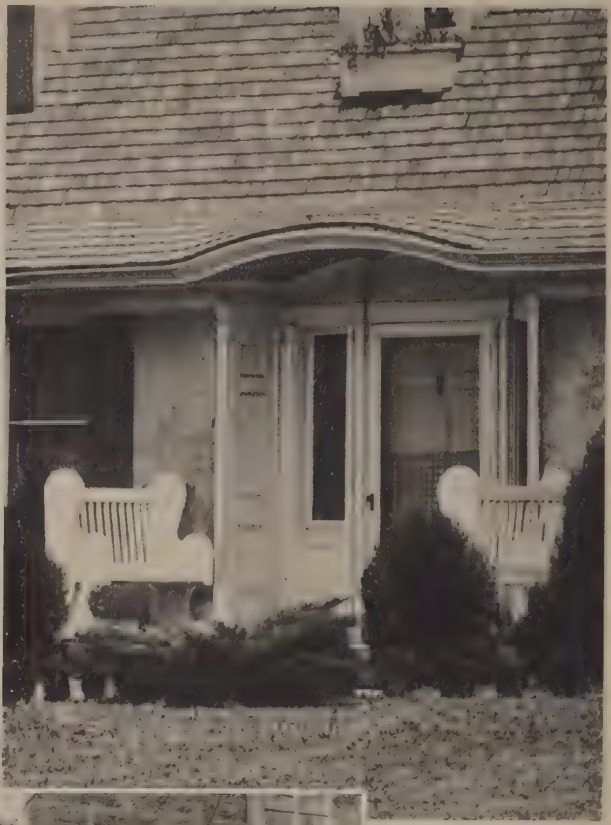




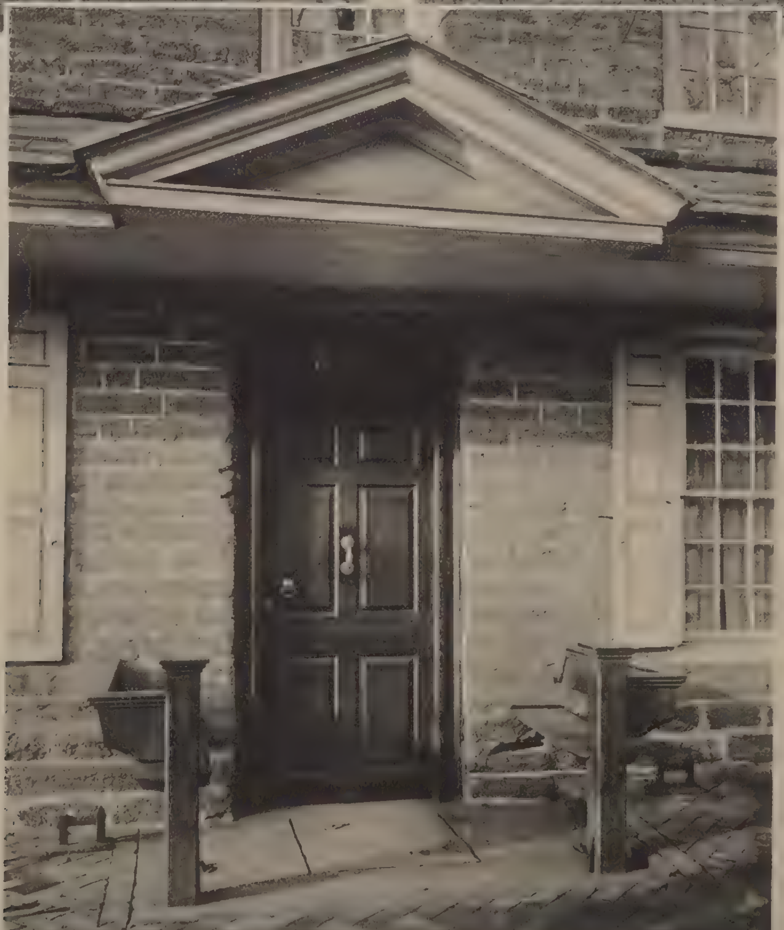
Winchelsea,
England



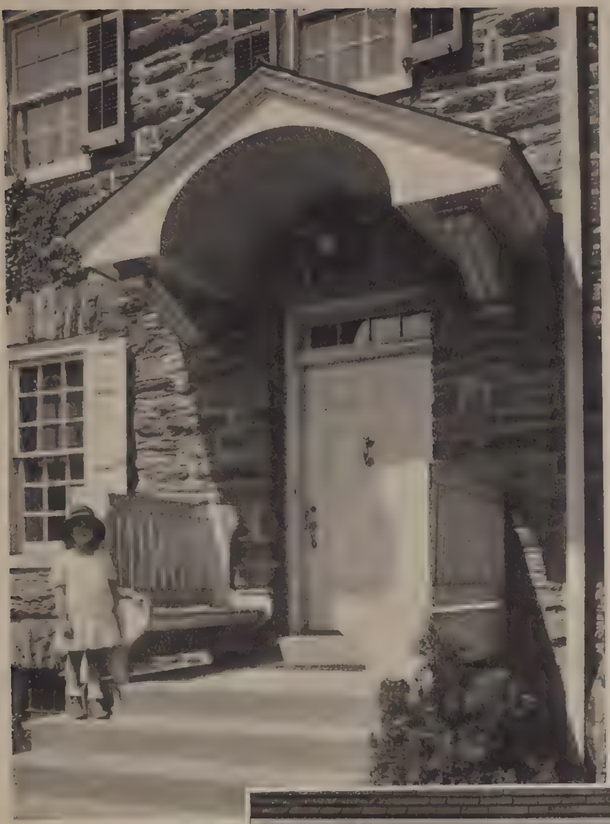
Mill Neck, N. Y.
William Lawrence Bottomley



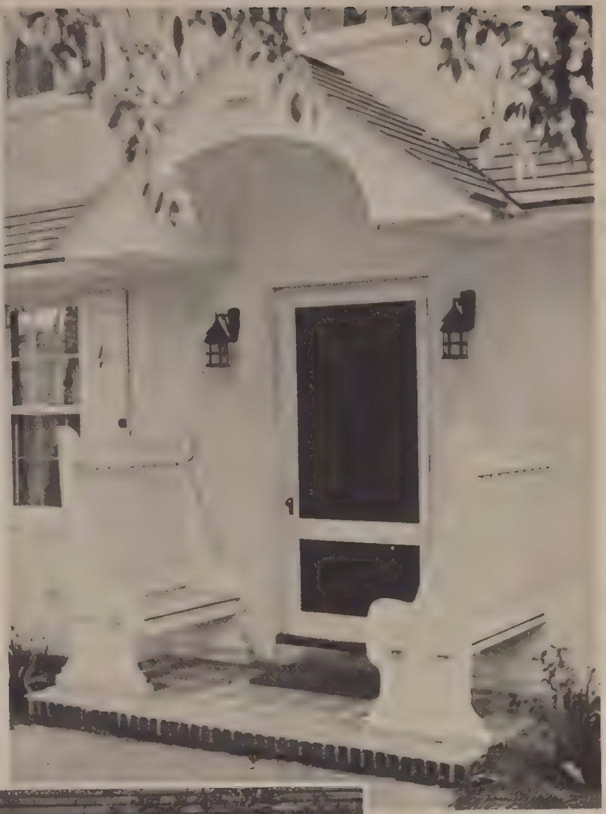
Kingsport, Tenn.
Clinton Mackenzie



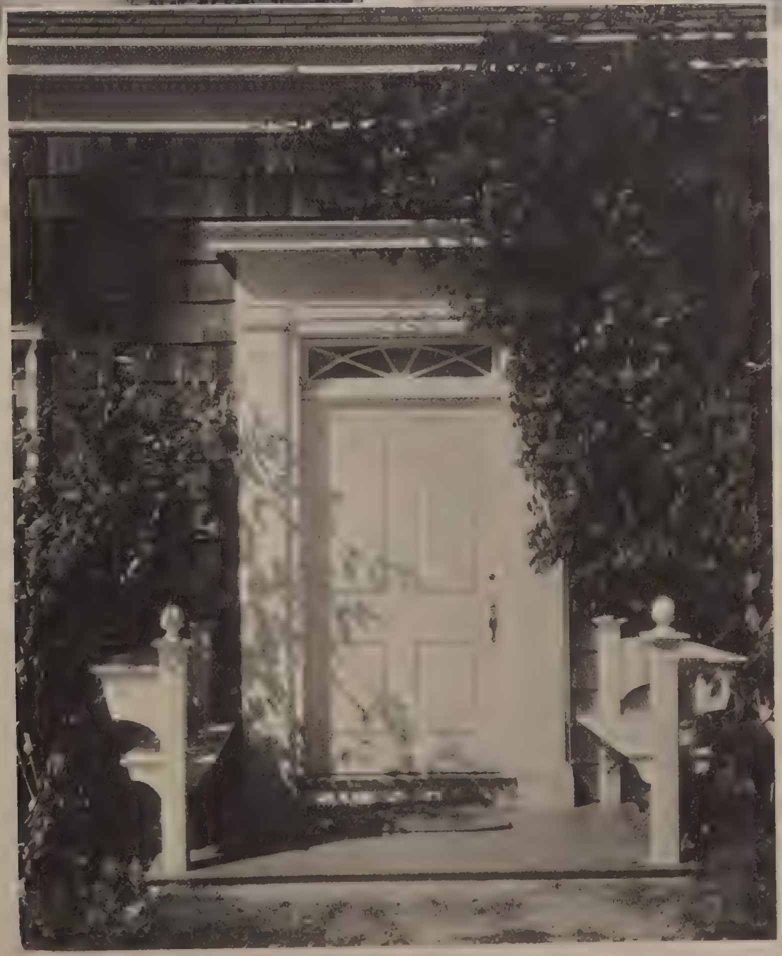
One of the oldest houses in Germantown, Pa.



Chestnut Hill, Pa.
Magaziner & Eberhard

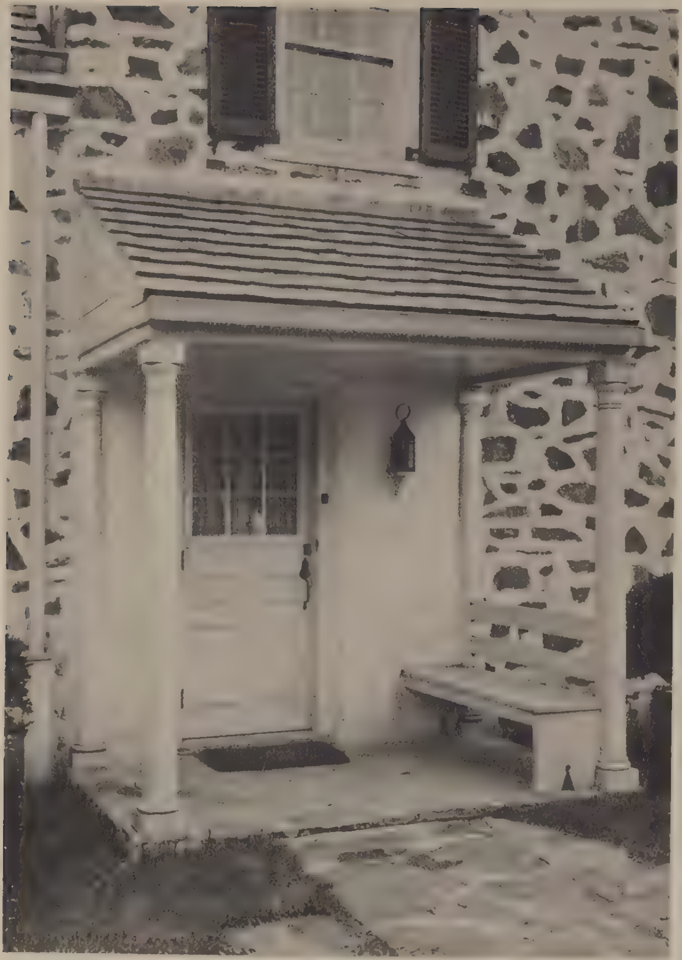


Pottstown, Pa.
Henry H. Saylor



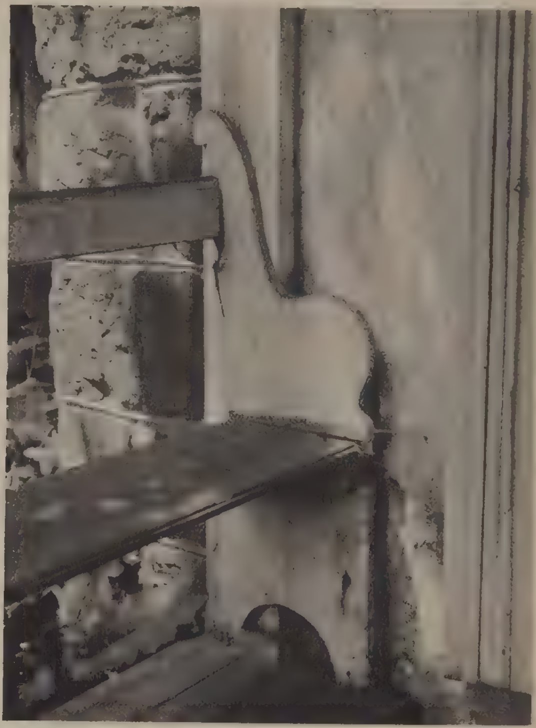
Falmouth, Mass.

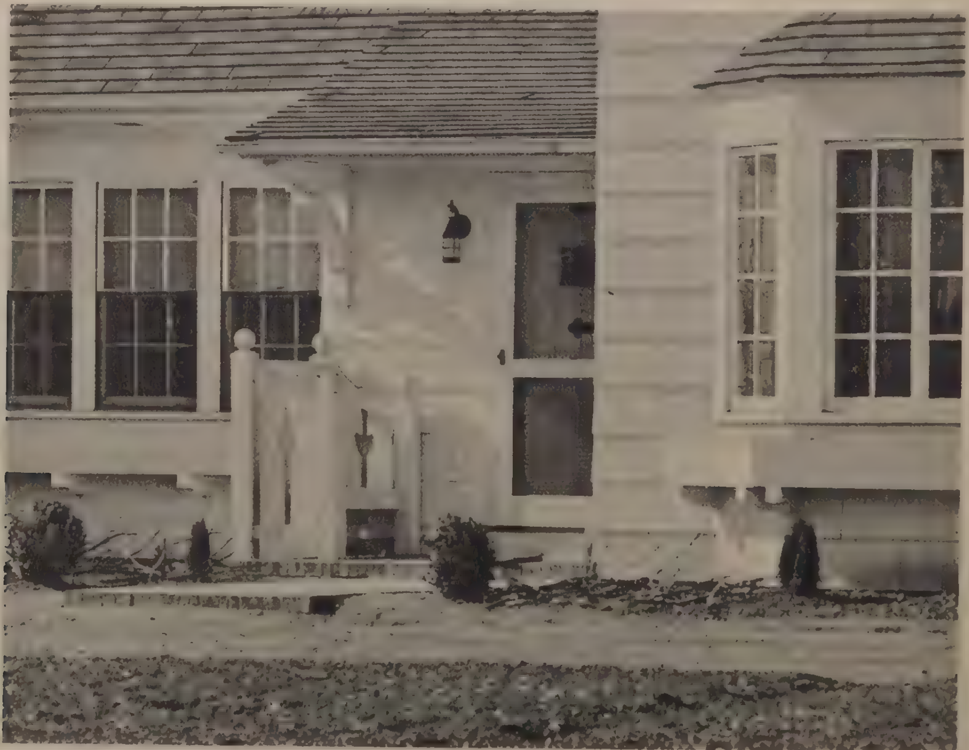
James C. Mackenzie



Narberth, Pa.
R. Brognard Okie

An old seat on a farmhouse in Berks County, Pa.

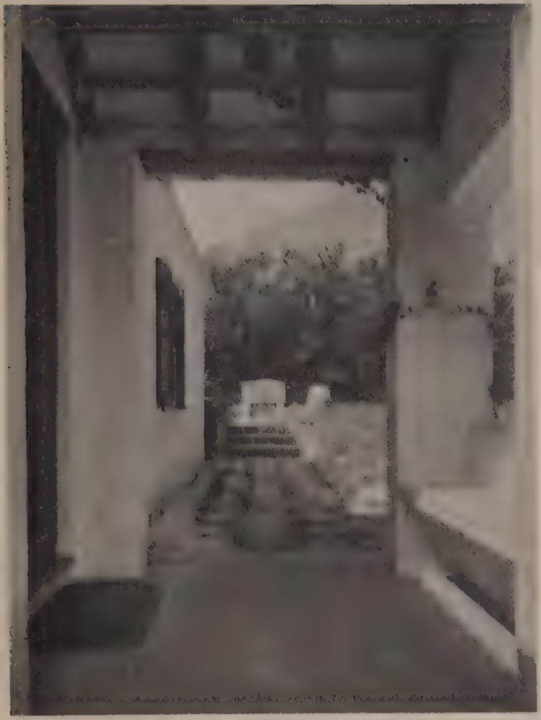


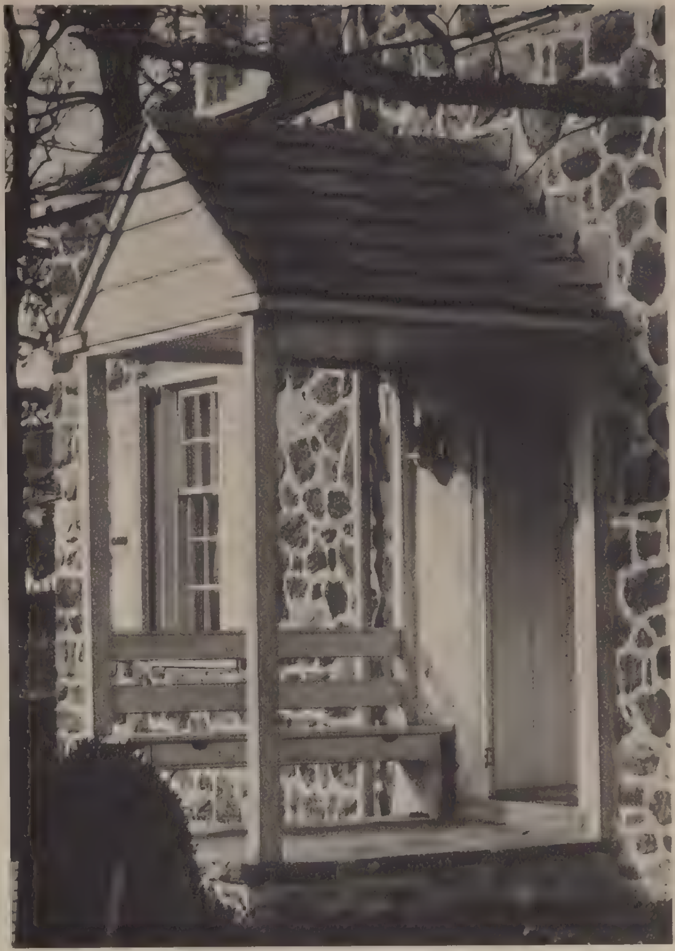


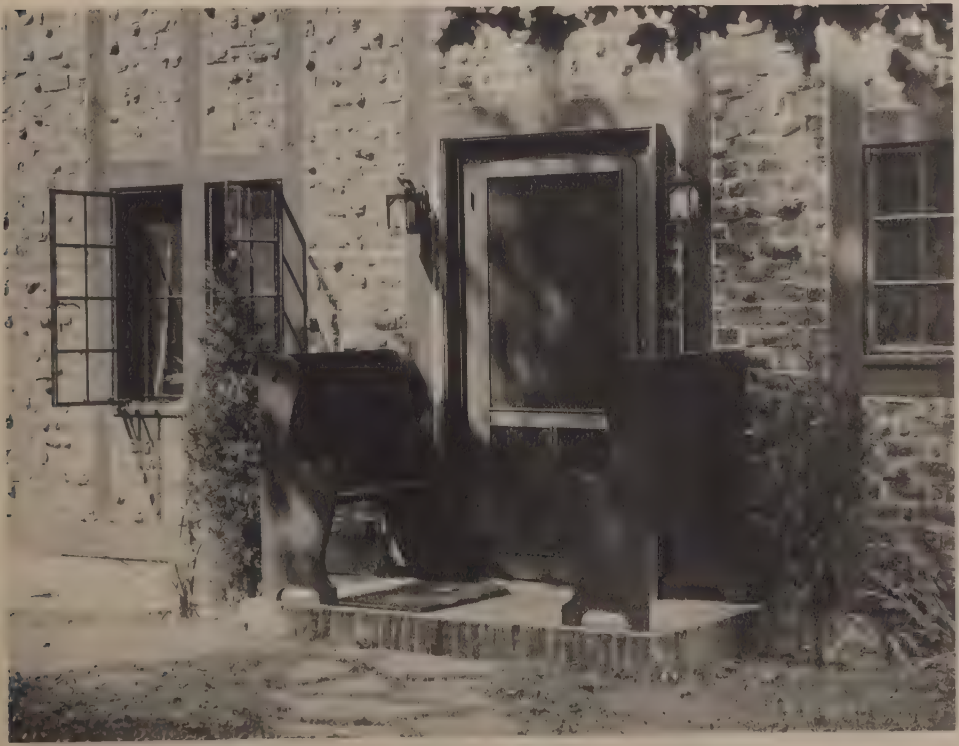
Dalton, Ga.
Crutchfield & Gosnell

Bryn Mawr, Pa.
R. Brognard Okie

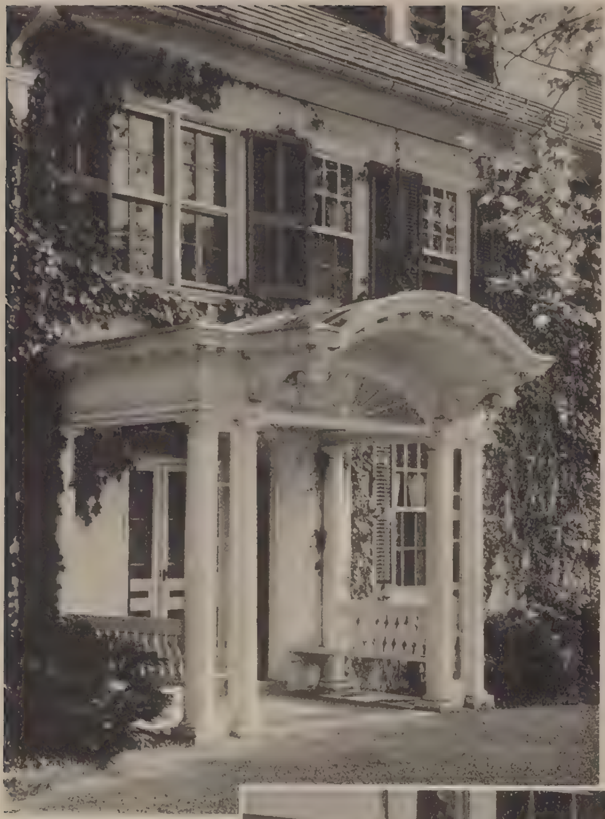
Tuckerstown, Bermuda



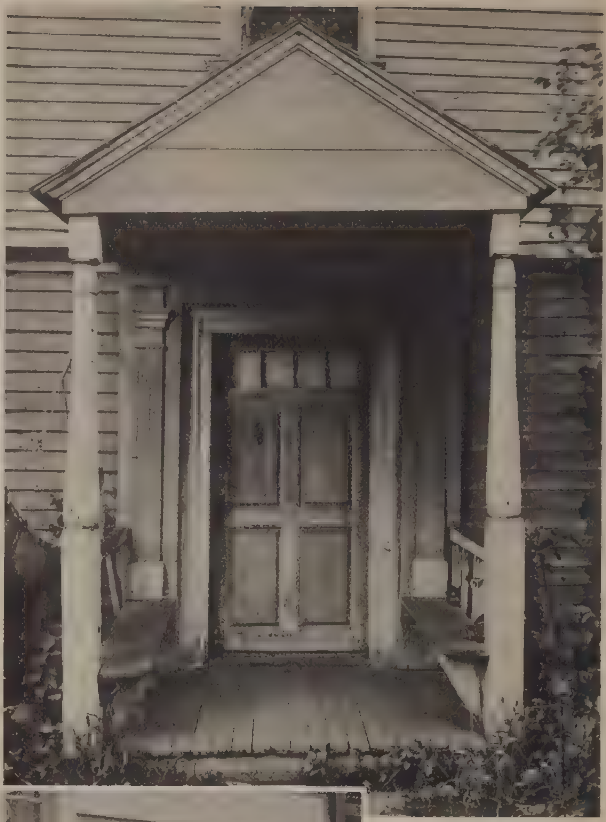




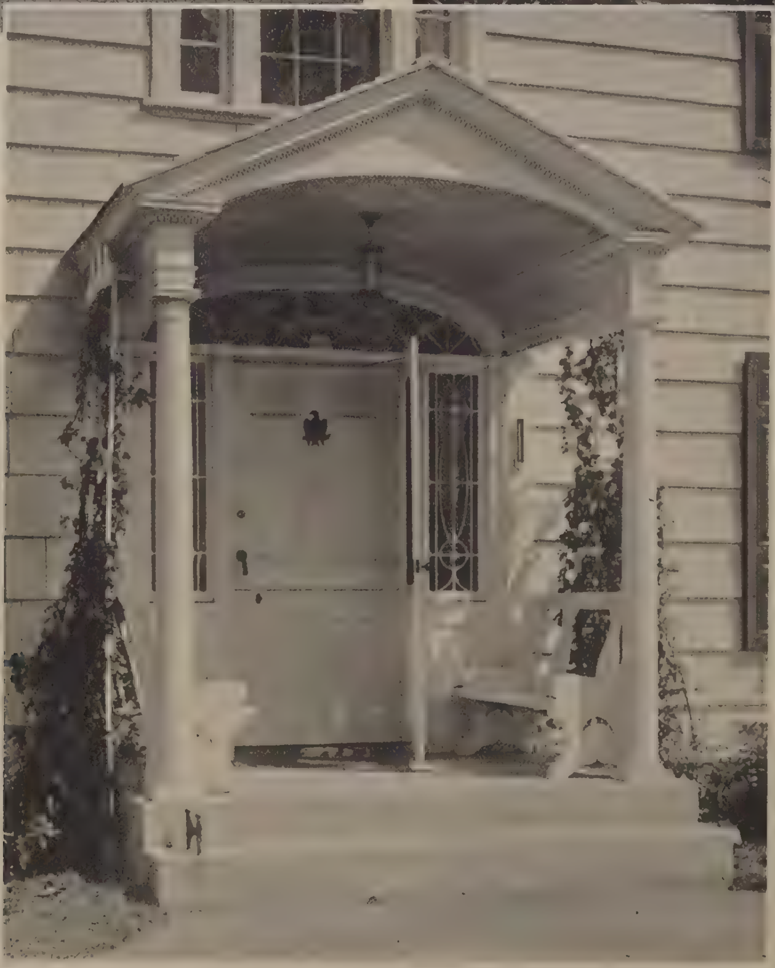
Great Neck, N. Y.
S. Edson Gage



Oreland, Pa.
Tilden, Register & Pepper

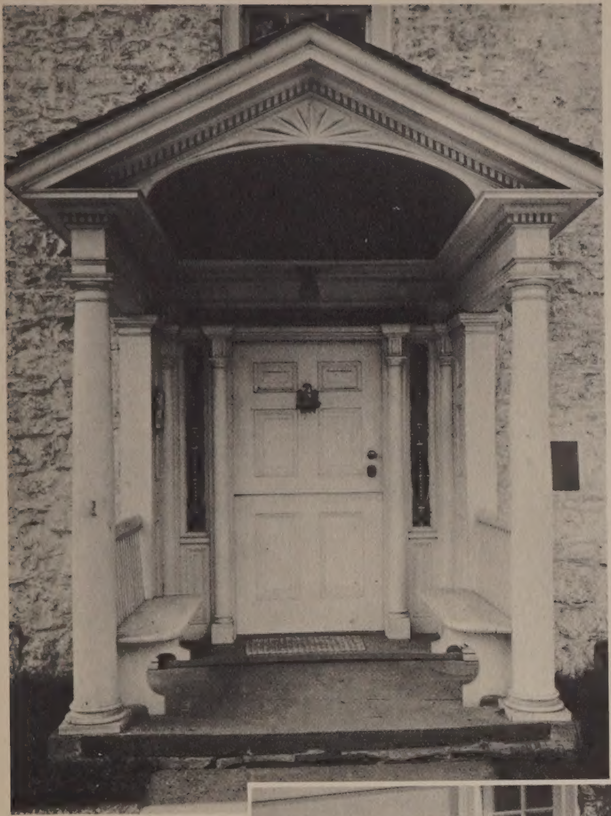


Old house at Fairfield, Conn.

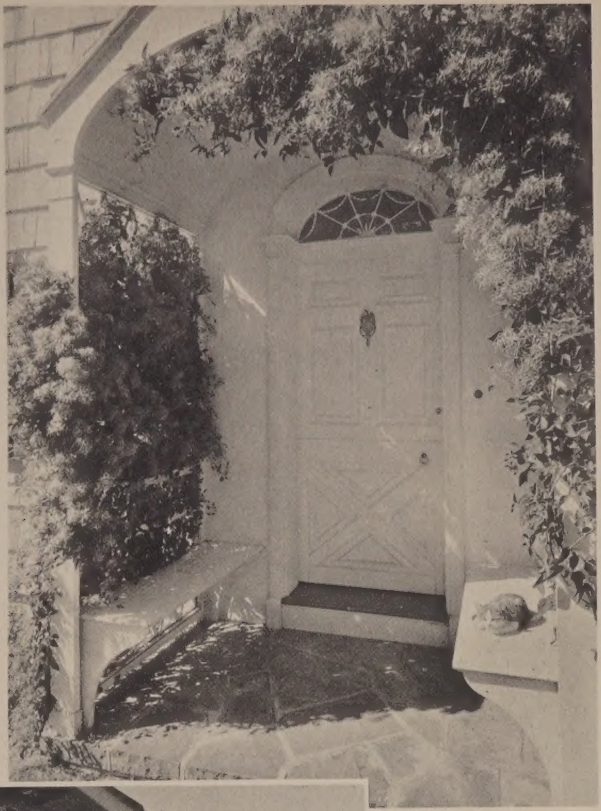


Bloomfield Hills, Mich.

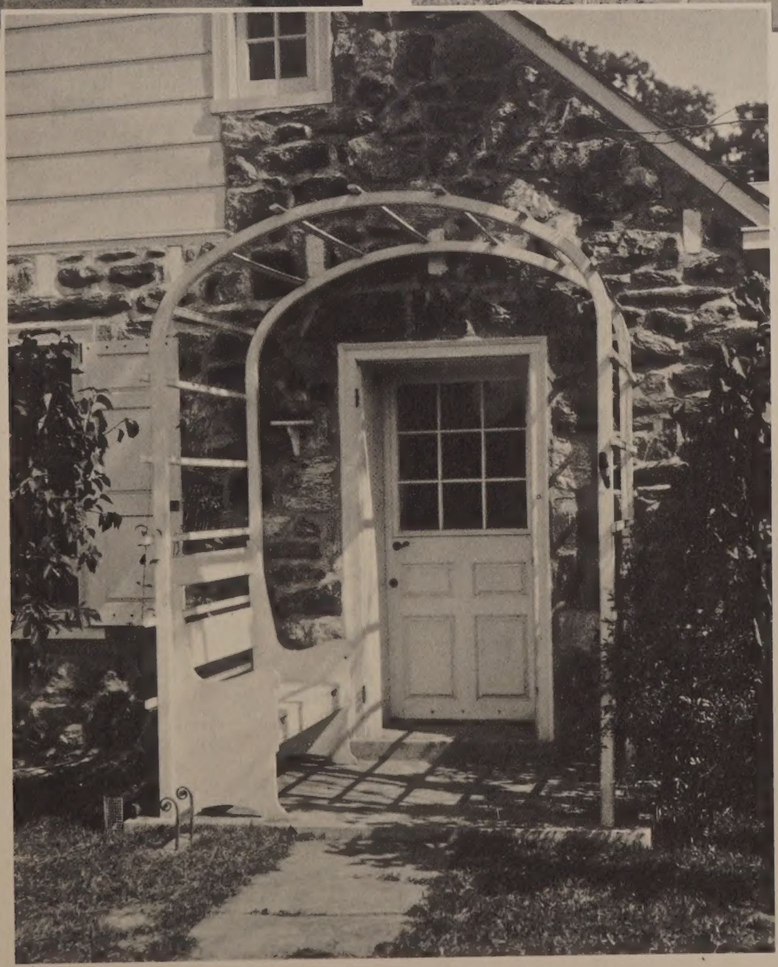
Electus D. Litchfield



Tappan House,
Kingston-on-
Hudson, N. Y.

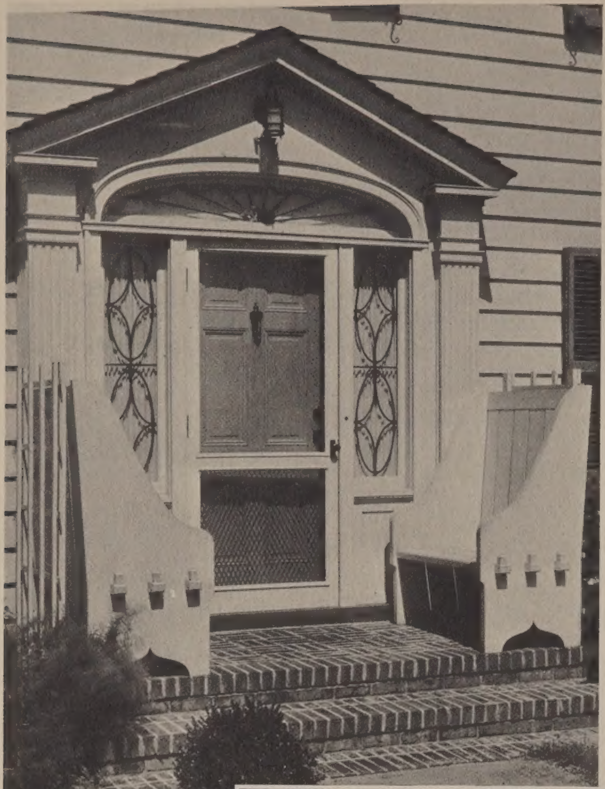


Ulster County,
N. Y.
Verna Cook
Salomonsky

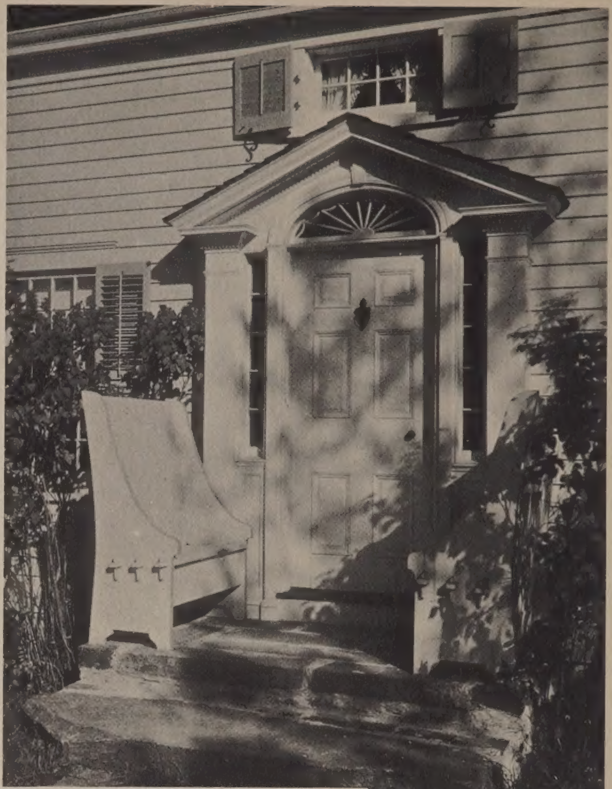


R. Brognard Okie

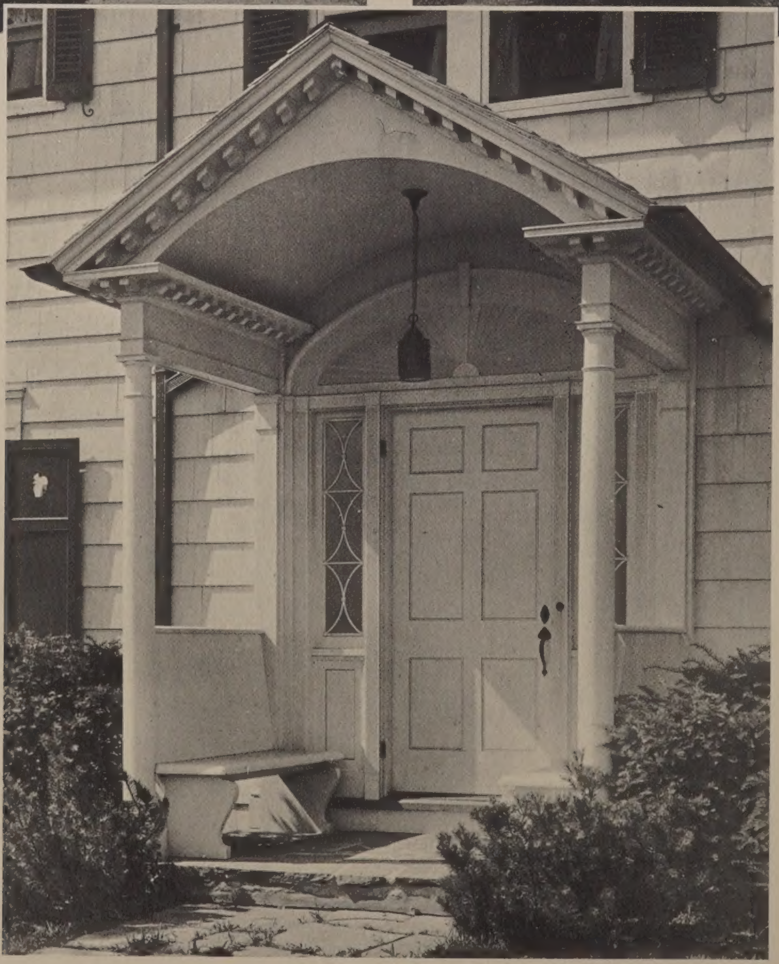
Narberth, Pa.



Stamford, Conn.
Butler & Provoost



Stamford, Conn.
Butler & Provoost



Northport, N. Y.

Charles M. Hart